

**REPORT TO THE LOUISIANA BOARD OF REGENTS**

**REVIEW OF TRADITIONAL ENHANCEMENT PROPOSALS IN BIOLOGICAL SCIENCES**

**March 5, 2015**

**Prepared by:**

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# **TRADITIONAL ENHANCEMENT REVIEW REPORT**

## **BIOLOGICAL SCIENCES**

**FY 2014-15**

### **Introduction**

The Biological Sciences Review Panel consisting of Dr. Melissa Harrington, Delaware State University, Chair; Dr. Greg Colores, Central Michigan University; and Dr. Jeffrey Dean, Mississippi State University, met March 5, 2015 via video conference to evaluate twenty-seven (27) Biological Sciences proposals submitted to the Louisiana Board of Regents requesting funds through the Traditional Enhancement component of the Boards of Regents Support Fund.

The panel received the following materials prior to the visit: (1) all proposals and appropriate rating forms; (2) a summary of the proposals submitted listing titles, PIs, their institutions, and funds requested; (3) a copy of the most recent Biological Sciences report (FY 2011-12); and (4) the FY 2014-15 Traditional and Undergraduate Enhancement Program Request for Proposals containing criteria for evaluation. After studying all proposals, the panel convened via teleconference to rate them and make funding recommendations. During the review each proposal was discussed individually and its merits were evaluated with respect to criteria detailed in the RFP. Each proposal received a thorough and impartial review. Subsequent to the individual evaluations, the panel ranked all proposals and recommended funding levels for those deemed worthy of funding.

The twenty-seven (27) Biological Sciences proposals submitted in FY 2014-15 requested a total of \$2,352,358 in first-year funds. Ten (10) proposals were highly recommended for funding, three (3) at reduced levels.

Table I contains a rank-order list of proposals highly recommended for funding, together with the recommended funding levels. Table II contains a list of proposals recommended for funding should additional monies become available. Table III contains a list of proposals not recommended for funding. A detailed review of each proposal follows immediately after the tables. A summary of all proposals submitted (Appendix A) and a copy of the rating forms used in the evaluations (Appendix B) are attached at the end of the report.

**TABLE I**  
**PROPOSALS HIGHLY RECOMMENDED FOR FUNDING**

Rank	Rating	Proposal Number	Institution	First Year Funds Requested	First Year Funds Recommended	Second Year Funds Requested	Second Year Funds Recommended
1	93.5	18BS-15	SLU	\$52,288	\$52,288		
2	92	04BS-15	LSU-BR	\$45,100	\$45,100		
3	90	22BS-15	UL-M	\$73,184	\$73,184		
4	89	02BS-15	LSU-AG	\$19,466	\$19,466		
5	86	03BS-15	LSU-AG	\$131,887	\$131,887		
6	85	05BS-15	LSU-BR	\$121,248	\$121,248		
7	84.5	08BS-15	LSU-BR	\$133,378	\$133,378		
8	83	13BS-15	LaTech	\$115,359	\$66,000		
9	82.5	14BS-15	Nicholls	\$65,160	\$58,697		
10	82	17BS-15	SLU	\$110,676	\$73,000		
<b>TOTALS:</b>				<b>\$867,746</b>	<b>\$774,248</b>	<b>\$0</b>	<b>\$0</b>

**TABLE II**  
**PROPOSALS RECOMMENDED IF ADDITIONAL FUNDING BECOMES AVAILABLE**

Rank	Rating	Proposal Number	Institution	First Year Funds Requested	First Year Funds Recommended	Second Year Funds Requested	Second Year Funds Recommended
11	81	11BS-15	LSU-S	\$79,000	\$79,000		
12	80.5	24BS-15	UL-M	\$76,429	\$76,429		
<b>TOTALS:</b>				<b>\$155,429</b>	<b>\$155,429</b>	<b>\$0</b>	<b>\$0</b>

**TABLE III  
PROPOSALS NOT RECOMMENDED FOR FUNDING**

<b>Rank</b>	<b>Rating</b>	<b>Proposal Number</b>	<b>Institution</b>	<b>First Year Funds Requested</b>	<b>First Year Funds Recommended</b>	<b>Second Year Funds Requested</b>	<b>Second Year Funds Recommended</b>
13	80	15BS-15	Nicholls	\$63,794	\$0		
14	79	06BS-15	LSU-BR	\$146,965	\$0		
15	78	21BS-15	UL-L	\$48,776	\$0		
16	77.5	09BS-15	LSU-BR	\$220,650	\$0		
17	77	07BS-15	LSU-BR	\$69,231	\$0		
17	77	19BS-15	UL-L	\$88,755	\$0		
17	77	26BS-15	UL-M	\$9,775	\$0		
20	76	01BS-15	LSU-AG	\$127,950	\$0		
21	75.5	10BS-15	LSU-S	\$44,031	\$0		
22	75	27BS-15	UL-M	\$22,945	\$0		
23	74.5	16BS-15	OLHCC	\$78,425	\$0	\$0	\$0
24	74	12BS-15	LSU-S	\$46,420	\$0		
25	72	20BS-15	UL-L	\$71,560	\$0		
26	61.5	23BS-15	UL-M	\$37,426	\$0		
27	48	25BS-15	UL-M	\$252,480	\$0		
<b>TOTALS:</b>				<b>\$1,329,183</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 01BS-15

INSTITUTION: Louisiana State University Agricultural Center

TITLE OF PROPOSAL: Equipment for the Enhancement of Cold Pasteurization and Filter Separation of Health Beneficial Bioactives, Teaching and Research at Louisiana State University Agricultural Center

PRINCIPAL INVESTIGATOR: Kayanush Aryana

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 9 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)  
B.2 15 (of 21 points)  
B.3 5 (of 5 points)  
B.4 3 (of 5 points)  
B.5 3 (of 5 points)  
B.6 5 (of 5 points)  
B.7 0 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

76
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$127,950  
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire filtration equipment to enhance teaching and research at the School of Animal Sciences. A good case is made for the importance of the equipment and its impact on the ability of the institution to conduct research and train students in critical processes and techniques. The outreach efforts and collaborations with industry are positive. However, the objectives are not measurable and are really more activities than objectives. The work plan is brief and lacks details. More details are needed about how use of the equipment would be scheduled and managed. The section on the impact on curriculum focuses on graduate students and courses with very little description of the impact on the undergraduate curriculum. More information about how the requested equipment conducts the different filtrations and the maintenance and sanitation processes would have strengthened the proposal. The repetition of what each type of filtration does rather than descriptions of the equipment did not strengthen the proposal. The PI appears to be very experienced in this area, but no evidence of specific training on this piece of equipment is provided. No evaluation plan is presented. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 02BS-15

INSTITUTION: Louisiana State University Agricultural Center

TITLE OF PROPOSAL: Enhancing the Food Science Carbohydrate Laboratory

PRINCIPAL INVESTIGATOR: Joan King

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes   X   No \_\_\_\_\_  
A.2   4   (of 5 points)  
A.3   5   (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1   6   (of 6 points)  
C.2   1   (of 1 point)  
C.3   3   (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1   2   (of 2 points)  
E.2a  10   (For S/E)  
or \_\_\_\_\_ (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1   7   (of 10 points)  
B.2  16   (of 21 points)  
B.3   5   (of 5 points)  
B.4   5   (of 5 points)  
B.5   5   (of 5 points)  
B.6   5   (of 5 points)  
B.7   3   (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1  12   (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes   X   No \_\_\_\_\_

G. Total Score: 89 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount:  \$19,466 

RECOMMENDATIONS: Recommended Amount:  \$19,466 

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire equipment for teaching and research in the Food Science Department. Linking the request to a recent USDA review of the program is a strength. Good examples are provided for the types of analyses students will be able to perform with the requested equipment. Measuring increased student quality through use of the food science college bowl results is a creative assessment measure. However, several of the objectives are not measurable and are actually activities that will be undertaken rather than goals to reach. An effective description is provided for the value-added aspects of the work. The work plan is relatively brief. An exact description of what the equipment is and what it will be used for is not provided until late in the proposal. This should be covered in the rationale for the equipment and impact statements. The evaluation plan lacks details. However, the project goals are well written and persuasive. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 03BS-15

INSTITUTION: Louisiana State University Agricultural Center

TITLE OF PROPOSAL: Enhancing Plant Health and Food Safety Research and Teaching Capabilities in Louisiana

PRINCIPAL INVESTIGATOR: Melanie Lewis Ivey

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 8 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)  
B.2 19 (of 21 points)  
B.3 4 (of 5 points)  
B.4 5 (of 5 points)  
B.5 5 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

86
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$131,887

RECOMMENDATIONS: Recommended Amount: \$131,887

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal requests two environmental chambers of different sizes for growing plants inoculated with plant or human pathogens. Secure containment of infectious agents is not possible with current equipment. The research is important and timely, and the new equipment should improve chances for external funding. The project objectives are not measurable and are actually activities. The rationale and impact sections are clear and well described. The PI's teaching expertise and research activities are nicely integrated into the project. The plan for introducing the equipment for student training is reasonable. The lack of measurable objectives weakens the evaluation plan. The description of the economic and cultural impact of the project is also weak. There are no letters of support from other faculty, which might have indicated a wider need. The standard operating procedures and practicum should be developed by the PIs rather than a graduate student. A report from an external evaluation team strengthened the argument for need. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 04BS-15

INSTITUTION: Louisiana State University and A & M College-Baton Rouge

TITLE OF PROPOSAL: Acquisition of an Automatic Crystal Centering System for Protein Crystallography and Installation of a Crystal-Mounting Robot

PRINCIPAL INVESTIGATOR: Henry Bellamy

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 9 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)  
B.2 20 (of 21 points)  
B.3 5 (of 5 points)  
B.4 3 (of 5 points)  
B.5 5 (of 5 points)  
B.6 3 (of 5 points)  
B.7 5 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

92
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$45,100  
RECOMMENDATIONS: Recommended Amount: \$45,100

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal requests a motorized crystal alignment system which will allow crystals to be aligned remotely and maximize use of a SAM system recently acquired on long-term loan for CAMD's beamline. The equipment makes the beamline facilities more efficient and will be widely used by investigators from several institutions. Remote operation will provide increased access. Overall, the installation is near or at state-of-the-art, and these new additions should greatly elevate the facility's profile. Dedicated, experienced staff will be on hand. Details are lacking for the impact on curriculum. There is cursory mention of accessibility to HBCUs but no details are provided. More details on the nature of the loan of the mounting robot would have improved the proposal. The discussion of how this investment will contribute to the regional and national profiles of the facility is strong. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 05BS-15

INSTITUTION: Louisiana State University and A & M College-Baton Rouge

TITLE OF PROPOSAL: Equipment for Near-5-Micron Resolution Phase Contrast  
X-ray Imaging to Enable Soft Tissue Contrast at Reduced  
X-ray Dose

PRINCIPAL INVESTIGATOR: Dominique Hombberger

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 9 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)  
B.2 19 (of 21 points)  
B.3 5 (of 5 points)  
B.4 4 (of 5 points)  
B.5 3 (of 5 points)  
B.6 3 (of 5 points)  
B.7 3 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

85
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$121,248  
RECOMMENDATIONS: Recommended Amount: \$121,248

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to upgrade an existing X-ray tomography beamline to handle interferometer gratings for phase-contrast imaging. The project includes an interesting collaboration with a national lab. The management plan appears sound and the integration of this system into an existing user facility plan is a strength. The discussion of economic development is strong, and the potential development of a new spinoff company is a major positive. The proposal appears to be dependent on a pending NSF request. Few details are provided for impact on curriculum and students. It appears to be primarily a research instrument request. The proposal states that iPad formats have been developed, but no examples are provided. Details on faculty development are lacking. However, a good case is made for the cutting-edge nature of the equipment and the potential for this investment to elevate the profile of this type of research in Louisiana. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 06BS-15

INSTITUTION: Louisiana State University and A&M College-Baton Rouge

TITLE OF PROPOSAL: GCMSMS Mass Spectrometer for Research and Teaching

PRINCIPAL INVESTIGATOR: Roger Laine

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 3 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 7 (For S/E)  
or \_\_\_\_\_ (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)  
B.2 14 (of 21 points)  
B.3 4 (of 5 points)  
B.4 3 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 5 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

79
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$146,965

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a workhorse Gas Chromatography TripleQuadrupole Mass Spectrometer to replace an aging machine that is heavily used. Good descriptions are provided of existing equipment and the need for the proposed instrument. Quality benchmarks are provided for evaluating goals. Specific measures of current student use and how it will change are not provided. A list of users is provided but none are listed as co-PIs, no letters of support are included and no specific examples are given of how the machine will be used. It is not clear that Biological Sciences is the best fit for the proposal. Though the instrument will be housed in a core facility accessible by multiple departments, most of the listed users appear to be synthetic chemists. The discussions of economic development and impact on eminence are mostly made in general terms and are not particularly strong. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

**PROPOSAL NUMBER:** 07BS-15

**INSTITUTION:** Louisiana State University and A&M College-Baton Rouge

**TITLE OF PROPOSAL:** Implementing Clinical Ultrasound in Kinesiology

**PRINCIPAL INVESTIGATOR:** Dennis Landin

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes   X   No \_\_\_\_\_  
 A.2   4   (of 5 points)  
 A.3   5   (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1   5   (of 6 points)  
 C.2   1   (of 1 point)  
 C.3   3   (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1   2   (of 2 points)  
 E.2a   8   (For S/E)  
 or \_\_\_\_\_ (of 10 points)  
 E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1   8   (of 10 points)  
 B.2 14.5 (of 21 points)  
 B.3   3.5 (of 5 points)  
 B.4   2   (of 5 points)  
 B.5   4   (of 5 points)  
 B.6   3   (of 5 points)  
 B.7   4   (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1  10   (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes   X   No \_\_\_\_\_

**G. Total Score:** 77 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

**SPECIFIC BUDGETARY Requested Amount:**   \$69,231  

**RECOMMENDATIONS: Recommended Amount:**       \$0      

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The Department of Kinesiology requests funds to acquire a portable ultrasound and electromyography machine. The benchmarks with outcomes are explicitly stated, although some are very weak, such as using one machine in one research project and one grant per year. No specific lab plans are provided. The work plan is very brief and lacks details. A number of generalizations are made about how the equipment will better prepare students and faculty without detailed examples. It is not clear what research will be done or how research activity will be increased. The evidence of potential to achieve eminence focuses on the past and does not link to the requested equipment. The evidence of impact on the curriculum is simply a list of classes. The proposal would have been stronger if it included some specific examples of learning activities that the new equipment will make possible. The evaluation plan is weak. It is not clear who would be in charge of maintaining the equipment and scheduling and monitoring its use. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 08BS-15

INSTITUTION: Louisiana State University and A & M College-Baton Rouge

TITLE OF PROPOSAL: Acquisition of a Widefield Microscopy System Enhanced for Live Cell Imaging

PRINCIPAL INVESTIGATOR: John Larkin

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_

A.2 5 (of 5 points)

A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5.5 (of 6 points)

C.2 1 (of 1 point)

C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1.5 (of 2 points)

E.2a 7 (For S/E)

or (of 10 points)

E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)

B.2 17 (of 21 points)

B.3 5 (of 5 points)

B.4 4 (of 5 points)

B.5 4 (of 5 points)

B.6 4.5 (of 5 points)

B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

84.5
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$133,378

RECOMMENDATIONS: Recommended Amount: \$133,378

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests funding for the acquisition of a state-of-the-art fluorescence widefield microscope with enhanced live cell capabilities. The equipment would enhance the widely used Shared Instrumentation Facility. Strong evidence of faculty development is provided. A substantial match is pledged by LSU. The goal appears limited to simply acquiring the instrument, and no educational goals are provided. It is not clear how outdated the current equipment is given that the capabilities are sufficient to generate competitive funding proposals. It is not evident how this equipment will improve the quality of education. It is also not clear who will collect benchmark and evaluation data. The discussion of economic development was relatively weak. However, the PIs have an excellent funding track record and strong arguments are presented for how multiple research programs will be enhanced. A clear maintenance plan is presented. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 09BS-15

INSTITUTION: Louisiana State University and A&M College-Baton Rouge

TITLE OF PROPOSAL: X-ray Reconstruction of Moving Morphology [XROMM]:  
Cybertechnology to Advance Teaching, Research and  
Economic Opportunities in Biology Among Louisiana Colleges  
and Universities

PRINCIPAL INVESTIGATOR: Mandi Lopez

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes   X   No \_\_\_\_\_  
 A.2     4     (of 5 points)  
 A.3     4     (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1    4.5    (of 6 points)  
 C.2     1     (of 1 point)  
 C.3     2     (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1     1     (of 2 points)  
 E.2a     7     (For S/E)  
 or \_\_\_\_\_ (of 10 points)  
 E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1     8     (of 10 points)  
 B.2    17    (of 21 points)  
 B.3     4     (of 5 points)  
 B.4     3     (of 5 points)  
 B.5     4     (of 5 points)  
 B.6     4     (of 5 points)  
 B.7     4     (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1    10    (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes     X     No \_\_\_\_\_

G. Total Score: 77.5 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

SPECIFIC BUDGETARY Requested Amount:     \$220,650      
 RECOMMENDATIONS: Recommended Amount:         \$0        

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

Funding is requested to procure instrumentation for x-ray reconstruction and moving morphology on living organisms, which enables 3D analysis of system biomechanics. The system would allow the facility to serve as a regional center, with the next closest instrument in Atlanta. Along with the PIs, 18 additional benefitting researchers are identified, though the extensive biosketches for each appeared excessive. Little explanation is offered for measuring the objectives. Details are lacking for what would be possible with the equipment versus current limitations. The work plan consists of a list of potential applications. There are few details on how the equipment will be utilized in the curriculum, though plans are described for the creation of at least one new course. Also, multiple evaluation parameters are identified. Better-than-average interaction with the private sector is demonstrated, although demonstration of the economic development potential could be stonger. It is not clearly established why this machine is the best option or why this specific system was chosen. Details are lacking on PI experience with the equipment and dedicated staff for the imaging facility. No explanation is given for the requested LED televisions. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 10BS-15

INSTITUTION: Louisiana State University-Shreveport

TITLE OF PROPOSAL: Acquisition of Spectronic 200 Spectrometer to Enhance Introductory Biology and Chemistry Laboratories at LSU Shreveport

PRINCIPAL INVESTIGATOR: Stephen Banks

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 7 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 15.5 (of 21 points)  
B.3 3 (of 5 points)  
B.4 4 (of 5 points)  
B.5 3 (of 5 points)  
B.6 3 (of 5 points)  
B.7 3 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 9 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

75.5
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$44,031  
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks funds to replace entry-level teaching spectrophotometers that are a common component of undergraduate biology and chemistry laboratories. These new units would replace older, simpler models purchased several years ago using BoRSF funds. The equipment would be shared amongst biology, chemistry and biochemistry laboratories with a strong impact on student learning. Mention is made of the departments working together, but no examples are provided. Details are lacking on how objectives would be measured. A solid plan for incorporating the equipment into the curriculum is presented, though it is not clear why student data from 2007 is used. The discussion of economic impact appears to be a list of area businesses rather than concrete examples of partnerships and interactions. Information on what employers are looking for and how this equipment might prepare students would be helpful. It is unclear if there is a vision for how these basic instruments might help elevate the profile of the institution. Project evaluation relies primarily on student opinion, which is especially limited without prior reference. Details on previous awards are lacking. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 11BS-15

INSTITUTION: Louisiana State University-Shreveport

TITLE OF PROPOSAL: Enhancement of Spectroscopic Technology in Cell Biology and Molecular Biology Laboratories

PRINCIPAL INVESTIGATOR: Cran Lucas

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 7 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)  
B.2 17 (of 21 points)  
B.3 4 (of 5 points)  
B.4 4 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

81
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$79,000

RECOMMENDATIONS: Recommended Amount: \$79,000

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks funds to procure a circular-dichroism (CD) spectrometer which measures differential absorbance of right- and left-circularly polarized light by chiral molecules. This would be new technology for this particular program. The discussions of impact on existing resources, student quality and faculty development are very general and would be stronger if they related the CD equipment to current research and instruction and included some specific examples of faculty-student research projects that equipment would make possible. The project goals are a list of activities rather than actual goals. Overall, the instructional plan is relatively strong, and there is a good discussion for how the instrument would be made available for undergraduate experiential research opportunities. There is also a discussion of how this instrument could help contribute to the recruitment and retention of faculty, although it is difficult to appreciate just how significant an effect this might have. Discussions of external economic impact and elevating the institutional profile are not particularly insightful or illuminating. The project evaluation plan is adequate, though it would have been stronger if objectives had been matched to what is being evaluated. Full funding is recommended if additional funds become available.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 12BS-15

INSTITUTION: Louisiana State University-Shreveport

TITLE OF PROPOSAL: Enhancement of Molecular Genetics at LSUS

PRINCIPAL INVESTIGATOR: Tara Williams-Hart

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 7 (For S/E)  
or \_\_\_\_\_ (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 15 (of 21 points)  
B.3 3 (of 5 points)  
B.4 4 (of 5 points)  
B.5 4 (of 5 points)  
B.6 3 (of 5 points)  
B.7 3 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

74
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$46,420

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks a bioanalyzer, a -80°C freezer and a thermocycler to train students in molecular biology techniques. Supplies are also requested so that the bioanalyzer can be used as a flow cytometer and an analyzer for DNA, RNA and protein. These instruments are appropriate for training students in skill sets that are becoming increasingly common in biological laboratories. However, it is not clear from the proposal whether there is a plan for sustainability that would provide for the replacement of consumable analysis chips after completion of experiments. There is also no discussion of the shelf-life of these consumables, which can be an issue if the chips sit for long before use. No explanation is provided for why the current thermocycler and freezer are inoperable and need replacement. A good plan for curriculum integration is presented, but not for economic development or impact on institutional stature. The objectives are not measurable and are actually activities that will be undertaken to achieve objectives. The impact on curriculum section is too general and should focus on one or two classes and provide more details about how the equipment would improve the courses and the student experience. Some examples of specific faculty and research projects that would be enhanced would have strengthened the proposal. The evaluation plan would have benefited from additional detail about how it would be conducted. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 13BS-15

INSTITUTION: Louisiana Tech University

TITLE OF PROPOSAL: Fluorescence Imaging for Undergraduate Cell and Molecular Biology

PRINCIPAL INVESTIGATOR: Jamie Newman

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 8 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)  
B.2 18 (of 21 points)  
B.3 4 (of 5 points)  
B.4 5 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

83
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$115,359

RECOMMENDATIONS: Recommended Amount: \$66,000

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks two new inverted EVOS microscopes, one for the teaching labs and one for the research labs, as well as upgrades to two existing upright scopes. All instruments will be capable of performing high-quality fluorescence work. The rationale for the equipment and link with existing microscopy facilities are well described. The objectives as described are not very measurable. A very strong plan for integrating these instruments into the curriculum was presented. The equipment would be available to a large number of students per year. The expertise of the faculty related to the use and maintenance of the equipment is excellent. Another strength of the proposal was the outreach activities that included summer workshops to train K-12 teachers in fluorescence microscopy. The discussions of faculty development, economic development, and enhancement of institutional profile are not particularly strong. It appears that most project goals could be completed with purchase of one EVOS unit and an upgrade of one upright scope. Partial funding of \$66,000 is recommended with reductions to be made at the discretion of the PI. The institutional match may be reduced proportionately.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

**PROPOSAL NUMBER:** 14BS-15

**INSTITUTION:** Nicholls State University

**TITLE OF PROPOSAL:** Acquisition of a Controlled Environmental System to  
Enhance Biophysical Ecology Research and Education at  
Nicholls State University

**PRINCIPAL INVESTIGATOR:** Michael Darnell

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4 (of 5 points)  
A.3 4.5 (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 3 (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 7 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1 7.5 (of 10 points)  
B.2 17 (of 21 points)  
B.3 4 (of 5 points)  
B.4 4 (of 5 points)  
B.5 3.5 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1 12 (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes \_\_\_\_\_ No X

**G. Total Score:** 82.5 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

**SPECIFIC BUDGETARY**      **Requested Amount:** \$65,160  
**RECOMMENDATIONS:**      **Recommended Amount:** \$58,697

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a controlled environmental system consisting of four chambers capable of cycling temperature, light, humidity, and CO2. The equipment would support the research of three faculty members, and the supported projects are interesting and well described. The stated objectives are not measurable. The first objective is actually an activity that the PIs would undertake to reach the real project objective of improving opportunities for faculty and student research. Evaluation through student surveys is a questionable metric. Details are lacking on the integration of the project into curriculum. It is not clear how the equipment will support the planned Biophysical Ecology course. The economic impact section describes growing connections with the local seafood industry and environmental management agencies. The team is young but productive and the instrumentation will fit well with the strengths and emphasis of the department. Partial funding of \$58,697 is recommended with reductions to be made at the discretion of the PI. The institutional match may be reduced proportionately.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 15BS-15

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Enhanced Fish Age and Growth and Histological Assessments and Enhanced Study of Vertebrate Gene Functions

PRINCIPAL INVESTIGATOR: Allyse Ferrara

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 6 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)  
B.2 18 (of 21 points)  
B.3 4 (of 5 points)  
B.4 4 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

80
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$63,794  
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks funds for four microscopes, a micromanipulator, and a micro-injection system. The four team members work with an interesting biological system (spotted and alligator gar) and this new instrumentation would allow them to investigate gene expression during embryo development in these primitive fishes. The rationale for the project and impact on existing resources sections lack detail and would be stronger if the equipment requested was specifically linked with the activities it will be used for. The need for four different microscopes is not clearly established. The proposal did present a reasonable plan for how these instruments could contribute meaningfully to curriculum development. The discussion of economic development is adequate, but the case made for enhancement of institutional stature is general and not persuasive. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

**PROPOSAL NUMBER:** 16BS-15

**INSTITUTION:** Our Lady of Holy Cross College

**TITLE OF PROPOSAL:** Biology Educational Support for Tomorrow

**PRINCIPAL INVESTIGATOR:** Robert Pinner

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
 A.2 5 (of 5 points)  
 A.3 5 (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1 4.5 (of 6 points)  
 C.2 1 (of 1 point)  
 C.3 2.5 (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1 1 (of 2 points)  
 E.2a 6 (For S/E)  
 or \_\_\_\_\_ (of 10 points)  
 E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1 8 (of 10 points)  
 B.2 15 (of 21 points)  
 B.3 3 (of 5 points)  
 B.4 3 (of 5 points)  
 B.5 3.5 (of 5 points)  
 B.6 3 (of 5 points)  
 B.7 4 (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1 10 (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes \_\_\_\_\_ No X

**G. Total Score:** 74.5 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

	<b>YEAR 1</b>	<b>YEAR 2</b>
<b>SPECIFIC BUDGETARY RECOMMENDATIONS:</b>		
<b>Requested Amount:</b>	<u>\$78,425</u>	<u>\$0</u>
<b>Recommended Amount:</b>	<u>\$0</u>	<u>\$0</u>

**COMMENTS:** (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks to staff and equip a learning center to provide remediation and tutoring in anatomy and physiology for incoming students. Funds are also requested to market the healthcare program. This is a unique approach to instruction and promotion. The objectives are nicely described and very measurable, though specific numerical targets for the objectives would have made them stronger. The work plan is very ambitious. Significant institutional needs are addressed, but the project description lacks detail. Honors students will do the tutoring, so a support letter from the director of the honors program would have strengthened the proposal. It is not clear that the students will actually make use of the models or that the impact on student success would achieve projected levels. The visible human software might be a much more effective teaching tool for anatomy than models. Evidence is lacking in the proposal to support the argument that at-risk students fall behind with traditional lectures. Pedagogy is discussed in great detail, but without substantial demonstration that the approaches will enhance student success. The bibliography is not directly referenced throughout the proposal. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

**PROPOSAL NUMBER:** 17BS-15

**INSTITUTION:** Southeastern Louisiana University

**TITLE OF PROPOSAL:** Modernization and Improvements to the Vertebrate  
Collections at Southeastern Louisiana University

**PRINCIPAL INVESTIGATOR:** Kyle Piller

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 4.5 (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 7 (For S/E)  
or \_\_\_\_\_ (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1 7.5 (of 10 points)  
B.2 17.5 (of 21 points)  
B.3 4.5 (of 5 points)  
B.4 4.5 (of 5 points)  
B.5 4.5 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1 10 (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

**G. Total Score:** 82 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

<b>SPECIFIC BUDGETARY</b>	<b>Requested Amount:</b>	<u>\$110,676</u>
<b>RECOMMENDATIONS:</b>	<b>Recommended Amount:</b>	<u>\$73,000</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to procure a Zeiss microscope system for digital 3D reconstruction, two stereomicroscopes, and equipment for extraction and storage of DNA from specimens in a vertebrate collection that is developing a strong reputation as a regional resource. The project builds on prior efforts to develop this collection into an important niche resource for fish and reptiles. The rationale and impact of the request are clearly described. The objectives are well described, but they are activities rather than measurable goals. A strong plan is presented for how the digitally equipped scope will contribute imaged materials for incorporation into courses. The project team will also develop materials that can be delivered via the web, which has the potential to elevate the profile of this collection and the institution. Discussion of the potential impact of this investment in helping economic development is weak. Incorporating outreach activities to local schools and teachers might have improved this. The plan for DNA extraction and storage is not clear. Is there a systematic plan to extract DNA from the samples and archive it, or will it depend on the research interests of the PIs and student collections managers? The plan for maintenance of the equipment and scheduling of its use lacks detail. The need for stereomicroscopes could have been better argued. The highest priority equipment for this project appears to be the Zeiss digital scope. Partial funding of \$73,000 is recommended with reductions to be made at the discretion of the PI. The institutional match should be maintained in full.

# RATING FORM FOR ENHANCEMENT REQUESTS OTHER THAN EQUIPMENT PURCHASES

**PROPOSAL NUMBER:** 18BS-15

**INSTITUTION:** Southeastern Louisiana University

**TITLE OF PROPOSAL:** Branching Out with STEM: Enhancing Undergraduate  
Education through the Investigation of Genetically  
Modified Organisms

**PRINCIPAL INVESTIGATOR:** Tara Stoulig

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 4 (of 5 points)

**C. Faculty and Staff Expertise**

(Total of 12 Points)

C.1 11 (of 12 points)

**D. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

D.1 1 (of 2 points)  
D.2a 7.5 (For S/E)  
or \_\_\_\_\_ (of 10 points)  
D.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 62 Points)

B.1 10 (of 10 points)  
B.2 20 (of 20 points)  
B.3 8 (of 8 points)  
B.4 8 (of 8 points)  
B.5 8 (of 8 points)  
B.6 8 (of 8 points)  
B.7 3 (of 4 points)

**E. Previous Support Fund Awards**

(No Points Assigned)

F.1 Yes X No \_\_\_\_\_

**F. Total Score:** 93.5 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

**SPECIFIC BUDGETARY**      **Requested Amount:** \$52,288  
**RECOMMENDATIONS:**      **Recommended Amount:** \$52,288

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal includes an interesting collaboration between PIs at SLU and Northshore Technical Community College, as well as two high schools. The plan is to develop a hierarchical implementation plan for delivering genetics education to college, community college and high school students. The best way to learn is to teach, so this approach promises to be a valuable learning experience for college students, and will expose high school students to an important STEM-related topic. Materials would contain information about genetically modified organisms, and the project has the potential to yield a greater understanding of how current students at different levels of education conceptualize the debate around these organisms. The project has a unique pedagogical structure coupled with comprehensive assessments of student knowledge that should go a long way toward determining best practices for delivering this knowledge to skeptical and/or naive students. The work plan is clearly thought out and well described. The program builds on the existing Connect to Success program for which an memorandum of understanding is included. The proposal also includes support letters from high schools. The evaluation plan could be improved with more detail about how the data will be collected and analyzed. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 19BS-15

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Improving National Board Test Scores through an Improved Anatomy Lab Experience

PRINCIPAL INVESTIGATOR: Randy Aldret

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4.5 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5.5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 3 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1.5 (of 2 points)  
E.2a 8 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 16 (of 21 points)  
B.3 3.5 (of 5 points)  
B.4 3 (of 5 points)  
B.5 3 (of 5 points)  
B.6 2 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

77
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$88,755

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a virtual anatomical dissection table for anatomy and physiology courses. The sections regarding rationale and impact are clear and well described. The plan to deliver an assessment report to a faculty advisory council is a strength. Though the timeline is informative, the objectives, as presented, are confusing. The goals for the laboratory enhancement are measurable but would have been stronger if the proposal had included specific numerical targets. The enhancement plan is quite general and would have been improved by a more detailed description of how the courses will be modified using the new equipment and what the students will be doing after the enhancement that is different from what occurs now. Similarly, more specific examples of which faculty would benefit from the enhancements and descriptions of how they would benefit would have improved the proposal. What the evaluation plan describes as the "goals beyond the scope of work" should be the goals of the project, and acquiring the equipment and training faculty are the activities that are undertaken to reach those goals. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 20BS-15

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Fluorescence Detection Technology to Forward Research and Teaching of Cellular and Subcellular Biological Systems

PRINCIPAL INVESTIGATOR: Caryl Chlan

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 7 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 16 (of 21 points)  
B.3 2.5 (of 5 points)  
B.4 3 (of 5 points)  
B.5 3.5 (of 5 points)  
B.6 3 (of 5 points)  
B.7 3 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

72
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$71,560

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to procure a Nanodrop fluorimeter and a fluorescence plate reader that would replace an aging filter-based unit and allow the integration of fluorescent-based technology into teaching and research. A good justification is made for the selection of user-friendly equipment. Much of the proposal focuses on a series of strong cell biology and biochemistry research projects pursued by the four co-PIs. The research projects are intriguing and persuasive arguments are presented that the ability to pursue this research will elevate the departmental and institutional profiles. By contrast, the discussion of contributions to curriculum is lacking. It is not clear what impact procurement of these instruments would have on students other than those actually performing the described research. There are no support letters for the project, and the economic development discussion is weak. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 21BS-15

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Enhancement of Aquatic Microbial Ecology at University of Louisiana at Lafayette

PRINCIPAL INVESTIGATOR: Beth Stauffer

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4 (of 5 points)  
A.3 4 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 7 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7.5 (of 10 points)  
B.2 16.5 (of 21 points)  
B.3 4 (of 5 points)  
B.4 4 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 4 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

78
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$48,776

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to procure a portable flow cytometer for use in microbial ecology studies, potentially in situations where the instrument could be transported to the field. An impressive group of microbial ecologists would make use of the instrument, which provides a new capability to the institution. The proposal contains a relatively strong discussion of how this instrument could contribute to faculty research activity, though the heavy focus on this often led to redundancy. In contrast, the discussion of integrating this instrument into course curricula lacks details, and more specific examples are needed on how instruction will be improved. It is not clear how many students will be impacted. The discussions of the impact on economic development and student quality are limited. It appears that flow cytometers that are not portable are currently available to the team. While a portable cytometer is a valuable tool, using this for cell counts is not necessary to conduct microbiology labs. The transferability of the instrument into other areas of research appears limited. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 22BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Upgrade of ULM Zeiss PALM MicroBeam III Laser Capture Microdissection System

PRINCIPAL INVESTIGATOR: Karen Briski

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 5 (of 5 points)  
A.3 5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 8 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)  
B.2 19 (of 21 points)  
B.3 5 (of 5 points)  
B.4 5 (of 5 points)  
B.5 4 (of 5 points)  
B.6 4 (of 5 points)  
B.7 5 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

90
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$73,184

RECOMMENDATIONS: Recommended Amount: \$73,184

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks to upgrade an existing laser microdissection system that soon will not be supported by the manufacturer. A compelling argument is made for this upgrade to be completed in the near future so as not to risk the instrument breaking down without available support. Though there is a single PI, the case is made that several additional faculty maintain well-funded and highly productive research programs that rely on this instrument for critical parts of their work. The work plan is solid and the aims are good, though they should be the goals of the project, as upgrading the LCM is not an objective, but an activity that will be undertaken to meet the aims described. The users committee is a good idea to coordinate the use and maintenance of the instrumentation. The options for integrating this instrument into the teaching curriculum are limited and the discussion of this aspect of the project is weak. Discussions of external effects on economic development are similarly weak. It is not clear if the instrumentation is available to other institutions. However, very strong arguments are presented for the need to maintain this high level of research activity and elevate the profile of this research group. Full funding is recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 23BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Establishment of Pharmaceutical Tobacco Research Laboratory

PRINCIPAL INVESTIGATOR: Khalid El Sayed

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 3.5 (of 5 points)  
A.3 3 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 3 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 6 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 10 (of 21 points)  
B.3 3 (of 5 points)  
B.4 2 (of 5 points)  
B.5 2.5 (of 5 points)  
B.6 2.5 (of 5 points)  
B.7 3 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

61.5
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$37,426

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests unique instruments for tobacco research, including a cigarette smoke generator. The writing is often disjointed and difficult to follow. A cohesive work plan is not presented. The proposal should have focused on the resources related to the tobacco or tallow tree research projects and how the new equipment would complement them rather than simply listing the resources available. Acquiring the instrumentation is not the goal of the project; it is the activity that the grant funds would support. The measurable objectives presented are the actual goals for the project, though it is not clear how measurable some of them are. A more detailed description of the investigators' ongoing research and how it would be enhanced by the instrumentation would have improved the proposal, as would examples of potential student research projects. The statement of impact on faculty development is very broad and not specific to the requested instrumentation. The evaluation plan is adequate, but would have been stronger if explicitly tied to the measurable objectives. The proposal did not explain the need for the biocontainment cages or the potential impact on the PI's research. The discussion of impact on curriculum lacks details. It is not clear how many students will be impacted. The promotion of economic development section should have specifically focused on the instrumentation proposed. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 24BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Establishment of Peptide and Protein Facility at ULM

PRINCIPAL INVESTIGATOR: Seetharama Jois

**A. The Current Situation**

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
 A.2 4.5 (of 5 points)  
 A.3 4.5 (of 5 points)

**C. Equipment**

(Total of 10 Points)

C.1 4 (of 6 points)  
 C.2 1 (of 1 point)  
 C.3 1.5 (of 3 points)

**E. Economic and/or Cultural  
Development and Impact**

(Total of 12 Points)

E.1 1.5 (of 2 points)  
 E.2a 7 (For S/E)  
 or \_\_\_\_\_ (of 10 points)  
 E.2b \_\_\_\_\_ (For NS/NE)

**B. The Enhancement Plan**

(Total of 56 Points)

B.1 8.5 (of 10 points)  
 B.2 17.5 (of 21 points)  
 B.3 4.5 (of 5 points)  
 B.4 4 (of 5 points)  
 B.5 4 (of 5 points)  
 B.6 4.5 (of 5 points)  
 B.7 3 (of 5 points)

**D. Faculty and Staff Expertise**

(Total of 12 Points)

D.1 10.5 (of 12 points)

**F. Previous Support Fund Awards**

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

**G. Total Score:** 80.5 (of 100 points)

**(Note: Proposals with a total score below 70 will not be recommended for funding.)**

**SPECIFIC BUDGETARY Requested Amount:** \$76,429

**RECOMMENDATIONS: Recommended Amount:** \$76,429

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to purchase three major pieces of equipment: a peptide synthesizer, a semi-prep HPLC and a medium pressure protein purification system. Seven faculty members are identified who currently utilize commercial sources for this instrumentation and could benefit from this equipment. The group pursues interesting and relatively well-funded research. The rationale is clear. The goals and objectives section would have been stronger if the benchmarks in the work plan had been incorporated into the objectives to make them measurable. Arguments to demonstrate a need solely within this group, such as the number of proteins peptides purified or the total volume of column eluates over a week, month or year, are not provided. Discussions of how the equipment would contribute to instruction and economic development are adequate. The evaluation plan is reasonable, but should be described in more detail and more clearly linked to the objectives. The proposal would have been stronger if it had included a process for how the use of the equipment will be allocated among the users. However, the equipment will support the research of a large number of faculty members and will have a positive impact on instruction in a number of courses. Full funding is recommended if additional funds become available.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 25BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Human Performance Laboratory Equipment Proposal

PRINCIPAL INVESTIGATOR: David Kean

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4 (of 5 points)  
A.3 4.5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)  
C.2 1 (of 1 point)  
C.3 0 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)  
E.2a 4 (For S/E)  
or \_\_\_\_\_ (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)  
B.2 8 (of 21 points)  
B.3 1.5 (of 5 points)  
B.4 1.5 (of 5 points)  
B.5 2 (of 5 points)  
B.6 1 (of 5 points)  
B.7 1.5 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 7 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes \_\_\_\_\_ No X

G. Total Score: 

48
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$252,480

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to enhance the Department of Kinesiology's Human Performance Laboratory with three state-of-the art hardware and software packages. The equipment would improve the Department's research and teaching options. The objectives are reasonable and well described. The work plan is very general and lacks the detail necessary to evaluate the impact of the instrumentation. No concrete examples of instructional improvement are provided, such as class exercises that would be developed with the new equipment and the research projects that faculty and students would conduct. The project evaluation section would have been much stronger if it had addressed evaluation of the project objectives, which were well-described and easily measurable. Plans are not included for how the equipment would be allocated among users, how it would be maintained, and the resources for maintenance. The economic impact section lacks sufficient details. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 26BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Light Source for Photodynamic Inactivation [PDI] of Microbial Pathogens

PRINCIPAL INVESTIGATOR: Sami Nazzal

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4.5 (of 5 points)  
A.3 4.5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4.5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 6 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7.5 (of 10 points)  
B.2 18 (of 21 points)  
B.3 4 (of 5 points)  
B.4 4 (of 5 points)  
B.5 3.5 (of 5 points)  
B.6 3.5 (of 5 points)  
B.7 2 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

77
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$9,775

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks a highly specialized light source to investigate an alternative strategy for fighting antibiotic-resistant microbes. The technology has a fairly long history, but appears to have new potential because of both need (antibiotic resistance) and new technology (narrow bandwidth light and nanomaterials). The PI has received specialized training on this technology during a recent sabbatical and is well positioned to develop a unique independent research program. The goals are not measurable and the benchmarks appear arbitrary. The work plan lacks details. The equipment is not necessary to introduce the topic into current courses. While this is an interesting research area, the greatest drawback to this proposal is the relatively small number of researchers who would benefit immediately from procurement of this particular instrument. It is not clear how this lighting system would have substantive impact on curricula. Discussions of economic development opportunities, ability to attract high-quality students, and the elevation of institutional profile are similarly weak. Funding is not recommended.

# RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 27BS-15

INSTITUTION: University of Louisiana at Monroe

TITLE OF PROPOSAL: Low-volume Microfluidizer for Cell Disruption and the  
Fabrication of Nanosystems to Enhance Basic Research in  
Cell and Molecular Biology

PRINCIPAL INVESTIGATOR: Sami Nazzal

## A. The Current Situation

(Total of 10 Points)

A.1 Yes X No \_\_\_\_\_  
A.2 4.5 (of 5 points)  
A.3 4.5 (of 5 points)

## C. Equipment

(Total of 10 Points)

C.1 4.5 (of 6 points)  
C.2 1 (of 1 point)  
C.3 2 (of 3 points)

## E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)  
E.2a 5 (For S/E)  
or (of 10 points)  
E.2b \_\_\_\_\_ (For NS/NE)

## B. The Enhancement Plan

(Total of 56 Points)

B.1 7.5 (of 10 points)  
B.2 18 (of 21 points)  
B.3 4 (of 5 points)  
B.4 3 (of 5 points)  
B.5 3 (of 5 points)  
B.6 4 (of 5 points)  
B.7 2 (of 5 points)

## D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

## F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No \_\_\_\_\_

G. Total Score: 

75
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 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$22,945  
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks to procure a low-volume microfluidizer that would be used for procedures including lysis of cells or generation of fine emulsion/dispersions in small volumes. The instrument would complement an existing system that can handle samples at significantly higher volumes, which is a particular issue when samples are small or materials costly. There is a strong institutional match. While the instrumentation does provide an important capability for this group, it is not clear that this utility can be generalized to a wider group of users. Some of the objectives are measurable, though some, such as purchasing the equipment, are actually activities designed to meet actual objectives. The instrument appears to have relatively limited impact on curriculum. Specific examples are lacking for how students might use the equipment. The impact on economic development section might have been improved with evidence of partnerships to facilitate industry access to the existing instrument. The project evaluation is weak, and would have been improved if it had assessed progress in meeting the objectives. Funding is not recommended.

# **Appendix A**

## **Summary List of Proposals**

**Proposals Submitted to the Traditional Enhancement Program - Biological Sciences  
for the FY 2014-15 Review Cycle**

Proposal Number	PI Name	Institution	Duration	Equipment/Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
001BS-15	Dr. Kayanush Aryana	Louisiana State University Agricultural Center	1 Year	E	New Request	Equipment for the enhancement of cold pasteurization and filter separation of health beneficial bioactives, teaching and research at Louisiana State University Agricultural Center.	\$127,950.00	\$0.00	\$127,950.00
002BS-15	Dr. Joan King	Louisiana State University Agricultural Center	1 Year	E	New Request	Enhancing the Food Science Carbohydrate Laboratory	\$19,466.00	\$0.00	\$19,466.00
003BS-15	Dr. Melanie Lewis Ivey	Louisiana State University Agricultural Center	1 Year	E	New Request	Enhancing Plant Health and Food Safety Research and Teaching Capabilities in Louisiana	\$131,887.00	\$0.00	\$131,887.00
004BS-15	Prof. Henry Bellamy	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Acquisition of an automatic crystal centering system for protein crystallography and installation of a crystal-mounting robot.	\$45,100.00	\$0.00	\$45,100.00
005BS-15	Prof. Dominique Homberger	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Equipment for near-5-micron resolution phase contrast X-ray imaging to enable soft tissue contrast at reduced X-ray dose	\$121,248.00	\$0.00	\$121,248.00
006BS-15	Prof. Roger Laine	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	GCMSMS Mass Spectrometer for Research and Teaching	\$146,965.00	\$0.00	\$146,965.00
007BS-15	Prof. Dennis Landin	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Implementing Clinical Ultrasound in Kinesiology	\$69,231.00	\$0.00	\$69,231.00
008BS-15	Prof. John Larkin	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Acquisition of a Widefield Microscopy System Enhanced for Live Cell Imaging	\$133,378.00	\$0.00	\$133,378.00
009BS-15	Prof. Mandi Lopez	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	X-ray Reconstruction of Moving Morphology [XROMM]: Cybertechnology to Advance Teaching, Research and Economic Opportunities in Biology Among Louisiana Colleges and Universities	\$220,650.00	\$0.00	\$220,650.00
010BS-15	Prof. Stephen Banks	Louisiana State University in Shreveport	1 Year	E	New Request	Acquisition of Spectronic 200 Spectrometer to enhance Introductory Biology and Chemistry Laboratories at LSU Shreveport	\$44,031.00	\$0.00	\$44,031.00
011BS-15	Dr. Cran Lucas	Louisiana State University in Shreveport	1 Year	E	New Request	Enhancement of Spectroscopic Technology in Cell Biology and Molecular Biology Laboratories	\$79,000.00	\$0.00	\$79,000.00
012BS-15	Dr. Tara Williams-Hart	Louisiana State University in Shreveport	1 Year	E	New Request	Enhancement of Molecular Genetics at LSUS	\$46,420.00	\$0.00	\$46,420.00
013BS-15	Dr. Jamie Newman	Louisiana Tech University	1 Year	E	New Request	Fluorescence Imaging for Undergraduate Cell and Molecular Biology	\$115,359.00	\$0.00	\$115,359.00

**Proposals Submitted to the Traditional Enhancement Program - Biological Sciences  
for the FY 2014-15 Review Cycle**

Proposal Number	PI Name	Institution	Duration	Equipment/Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
014BS-15	Dr. M. Darnell	Nicholls State University	1 Year	E	New Request	Acquisition of a Controlled Environmental System to Enhance Biophysical Ecology Research and Education at Nicholls State University	\$65,160.00	\$0.00	\$65,160.00
015BS-15	Dr. Allyse Ferrara	Nicholls State University	1 Year	E	New Request	Enhanced Fish Age and Growth and Histological Assessments and Enhanced Study of Vertebrate Gene Functions	\$63,794.00	\$0.00	\$63,794.00
016BS-15	Dr. Robert Pinner	Our Lady of Holy Cross College	2 Years	E	New Request	Biology Educational Support for Tomorrow	\$78,425.00	\$0.00	\$78,425.00
017BS-15	Dr. Kyle Piller	Southeastern Louisiana University	1 Year	E	New Request	Modernization and Improvements to the Vertebrate Collections at Southeastern Louisiana University	\$110,676.00	\$0.00	\$110,676.00
018BS-15	Dr. Tara Stoulig	Southeastern Louisiana University	1 Year	NE	New Request	Branching Out with STEM: Enhancing Undergraduate Education through the Investigation of Genetically Modified Organisms	\$52,288.00	\$0.00	\$52,288.00
019BS-15	Prof. Randy Aldret	University of Louisiana at Lafayette	1 Year	E	New Request	Improving National Board Test Scores through an Improved Anatomy Lab Experience	\$88,755.00	\$0.00	\$88,755.00
020BS-15	Dr. Caryl Chlan	University of Louisiana at Lafayette	1 Year	E	New Request	Fluorescence detection technology to forward research and teaching of cellular and subcellular Biological systems	\$71,560.00	\$0.00	\$71,560.00
021BS-15	Prof. Beth Stauffer	University of Louisiana at Lafayette	1 Year	E	New Request	Enhancement of Aquatic Microbial Ecology at University of Louisiana at Lafayette	\$48,776.00	\$0.00	\$48,776.00
022BS-15	Dr. Karen B	University of Louisiana at Monroe	1 Year	E	New Request	Upgrade of ULM Zeiss PALM MicroBeam III Laser Capture Microdissection System	\$73,184.00	\$0.00	\$73,184.00
023BS-15	Prof. Khalid El Sayed	University of Louisiana at Monroe	1 Year	E	New Request	Establishment of pharmaceutical tobacco research laboratory	\$37,426.00	\$0.00	\$37,426.00
024BS-15	Dr. Seetharama Jois	University of Louisiana at Monroe	1 Year	E	New Request	Establishment of peptide and protein facility at ULM	\$76,429.00	\$0.00	\$76,429.00
025BS-15	Dr. David Kean	University of Louisiana at Monroe	1 Year	E	New Request	Human Performance Laboratory Equipment Proposal	\$252,480.00	\$0.00	\$252,480.00
026BS-15	Dr. sami nazzal	University of Louisiana at Monroe	1 Year	E	New Request	Light source for photodynamic inactivation [PDI] of Microbial Pathogens	\$9,775.00	\$0.00	\$9,775.00
027BS-15	Dr. sami nazzal	University of Louisiana at Monroe	1 Year	E	New Request	Low-volume microfluidizer for cell disruption and the fabrication of nanosystems to enhance basic research in cell and molecular biology	\$22,945.00	\$0.00	\$22,945.00

**\*The RFP restricts second year funding requests to no more than \$50,000.**

Total Number of Proposals submitted	27
Total Money Requested for First Year	\$2,352,358.00
Total Money Requested for Second Year	\$0.00
Total Money Requested	\$2,352,358.00

# **Appendix B**

## **Rating Forms**

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

**BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM, FISCAL YEAR 2010-11  
RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS  
REQUESTS OTHER THAN EQUIPMENT PURCHASES (e.g., Colloquia, Curricular Revisions, etc.)**

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration. Guidelines should not be interpreted to exclude from eligibility departments and/or units engaged solely in instruction. Use the white space provided to explain the panel's ratings, especially on items given low scores. Attach additional pages, as necessary.

**A. THE CURRENT SITUATION--Total of 10 points**

YES \_\_\_\_\_ NO \_\_\_\_\_

\_\_\_\_\_ of 5 pts.

\_\_\_\_\_ of 5 pts.

A.1 Has the applicant adequately described the institution and unit(s)/department(s) that will benefit from the proposed project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?

A.2 To what extent will the proposed project enhance the affected department(s) or unit(s)?

A.3 To what extent will the project complement and improve upon existing resources of the department(s) or unit(s)?

COMMENTS:

**B. THE ENHANCEMENT PLAN--Total of 66 points**

\_\_\_\_\_ of 5 pts.

\_\_\_\_\_ of 23 pts.

\_\_\_\_\_ of 25 pts.

\_\_\_\_\_ of 5 pts.

\_\_\_\_\_ of 2 pts.

\_\_\_\_\_ of 6 pts.

B.1 Are the goals and objectives clearly stated?

B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity, a schedule of activities with benchmarks to be accomplished, and a description detailing how each objective will be evaluated?

B.3 To what extent will the proposed project catapult the department(s) or unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence--commensurate with degree offerings and/or functions?

B.4 To what extent will the proposed project have an impact on the variety and quality of curricular offerings and instructional methods within the affected department(s) or unit(s)? Appropriate to current thinking in the specific field(s) or discipline(s) of the proposed project, is reform of undergraduate education and/or teacher preparation encouraged?

B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?

B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogical practices within the context of current thinking on reform of undergraduate education and teacher preparation, specific to field(s) or discipline(s) of the proposed project?

**C. FACULTY AND STAFF EXPERTISE--Total of 12 points**

\_\_\_\_\_ of 12 pts

C.1 Are the faculty and support personnel appropriately qualified to implement this project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

COMMENTS:

D. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT--Total of 12 points

\_\_\_\_\_ of 2 pts. D.1 To what extent will the project assist in establishing a new relationship, or strengthen an existing relationship, with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, another university or consortium of universities, federal government agency)?

NOTE TO REVIEWER: Depending on the discipline of the submitting department or unit, provide rating points for either D.2a OR D.2b:

\_\_\_\_\_ of 10 pts. D.2a For science/engineering proposals only: To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing the economic development of the State of Louisiana?

D.2b For non-science/non-engineering proposals only: To what extent will the project contribute to the academic and/or cultural resources of the State of Louisiana?

COMMENTS:

E. PREVIOUS SUPPORT FUND AWARDS--No points assigned

YES\_\_ NO\_\_ F.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

COMMENTS:

F. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

\_\_\_\_\_ of 100 points

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

**SPECIFIC BUDGETARY RECOMMENDATIONS**

Requested Amount:\$ \_\_\_\_\_ Recommended Amount:\$ \_\_\_\_\_

COMMENTS:

I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution: \_\_\_\_\_

Reviewer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

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BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM, FISCAL YEAR 2010-11  
RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS  
**PURCHASE OF INSTRUCTIONAL AND RESEARCH EQUIPMENT**

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration. Guidelines should not be interpreted to exclude from eligibility departments and/or units engaged solely in instruction. Use the white space provided to explain the panel's ratings, especially on items given low scores. Attach additional pages, as necessary.

A. THE CURRENT SITUATION--Total of 10 points

- YES \_\_\_\_ NO \_\_\_\_ A.1 Has the applicant adequately described the institution and unit(s)/department(s) that will benefit from the proposed project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?
- \_\_\_\_ of 5 pts. A.2 To what extent will the proposed project enhance the affected department(s) or unit(s)?
- \_\_\_\_ of 5 pts. A.3 To what extent will the project complement and improve upon existing resources of the department(s) or unit(s)?

COMMENTS:

B. THE ENHANCEMENT PLAN--Total of 56 points

- \_\_\_\_ of 5 pts. B.1 Are the goals and objectives clearly stated? Can the objectives be completed within the timeframe detailed in the proposal?
- \_\_\_\_ of 18 pts. B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity, a schedule of activities with benchmarks to be accomplished, and a description detailing how each objective will be evaluated?
- \_\_\_\_ of 20 pts. B.3 To what extent will the proposed project catapult the department(s) or unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence--commensurate with degree offerings and/or functions?
- \_\_\_\_ of 5 pts. B.4 To what extent will the proposed project have an impact on the variety and quality of curricular offerings and instructional methods within the affected department(s) or unit(s)? Appropriate to current thinking in the specific field(s) or discipline(s) of the proposed project, is reform of undergraduate education and/or teacher preparation encouraged?
- \_\_\_\_ of 2 pts. B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?
- \_\_\_\_ of 6 pts. B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogical practices within the context of current thinking on reform of undergraduate education and teacher preparation, specific to field(s) or discipline(s) of the proposed project?
- No Points Given, but this is a required component. B.7 Does the proposal indicate how the Board of Regents or other entity will determine whether or not the project has been a success and the degree to which it has achieved its goals?

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

COMMENTS:

C. EQUIPMENT--Total of 10 points

- \_\_\_\_\_ of 6 pts.      C.1      To what extent has the proposal established a relationship between the enhancement plan and the items of equipment requested? Is the equipment well-justified? Will it significantly enhance the existing technological capability of the department? Does it reflect current and projected trends in technology?
- \_\_\_\_\_ of 1 pt.      C.2      Has there been a thorough survey of the current equipment inventory and does the proposal plan to make full use of it?
- \_\_\_\_\_ of 3 pts.      C.3      To what extent does the proposal present a reasonable plan to ensure a maximum usable lifetime for the equipment? Are housing and maintenance arrangements for equipment adequate?

COMMENTS:

D. FACULTY AND STAFF EXPERTISE--Total of 12 points

- \_\_\_\_\_ of 12 pts      D.1      Are the faculty and support personnel appropriately qualified to implement this project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

COMMENTS:

E. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT--Total of 12 points

- \_\_\_\_\_ of 2 pts.      E.1      To what extent will the project assist in establishing a new relationship, or strengthen an existing relationship, with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, another university or consortium of universities, federal government agency)?

NOTE TO REVIEWER:      Depending on the discipline of the submitting department or unit, provide rating points for either E.2a OR E.2b:

- \_\_\_\_\_ of 10 pts.      E.2a      For science/engineering proposals only: To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing the economic development of the State of Louisiana?
- E.2b      For non-science/non-engineering proposals only: To what extent will the project contribute to the academic and/or cultural resources of the State of Louisiana?

COMMENTS:

Proposal Number: \_\_\_\_\_

Principal Investigator: \_\_\_\_\_

F. PREVIOUS SUPPORT FUND AWARDS--No points assigned

YES \_\_\_ NO \_\_\_ G.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

COMMENTS:

G. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

\_\_\_\_\_ of 100 points

**SPECIFIC BUDGETARY RECOMMENDATIONS**

Requested Amount \$ \_\_\_\_\_

Recommended Amount \$ \_\_\_\_\_

COMMENTS:

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I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution: \_\_\_\_\_

Reviewer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_