PROGRAM CONTACT: [redacted]

SUMMARY STATEMENT
(Privileged Communication)

Release Date: 10/30/2009

Application Number: 1 C06 RR029905-01

Principal Investigator

CADWALLADER, MARTIN PHD

Applicant Organization: UNIVERSITY OF WISCONSIN MADISON

Review Group: ZRR1 STRB-8 (02)
National Center for Research Resources Special Emphasis Panel
ARRA STRB September Meeting 4

Meeting Date: 09/08/2009
Council: JAN 2010
Requested Start: 12/01/2009

RFA/PA: RR09-008
PCC: CON

Dual IC(s): RA

Project Title: The Harlow Addition: Enhancing biomedical and behavioral NHP research at WNPRC

SRG Action: Impact/Priority Score: 40

Human Subjects: 10-No human subjects involved

Animal Subjects: 10-No live vertebrate animals involved for competing appl.

Project Year 1
TOTAL

ADMINISTRATIVE BUDGET NOTE: The budget shown is the requested budget and has not been adjusted to reflect any recommendations made by reviewers. If an award is planned, the costs will be calculated by Institute grants management staff based on the recommendations outlined below in the COMMITTEE BUDGET RECOMMENDATIONS section.

1C06RR029905-01 CADWALLADER, MARTIN

RESUME AND SUMMARY OF DISCUSSION: This new C06 application for the Recovery Act Limited Competition: Extramural Research Facilities Improvement Program from the University of Wisconsin, Madison entitled "The Harlow Addition: Enhancing Biomedical and Behavioral NHP Research at WNPRC" requests $15,000,000 in total costs. The project is to construct a major addition to a primate research center for additional housing and research space that will accommodate research on aging, AIDS, and reproductive biology.

Criterion	Critique 1	Critique 2	Critique 3
Significance and Need	2	3	6
Project Management and Institutional Commitment	1	2	7
Design Considerations	1	5	6
Equipment	1	4	2
Environment	1	6	6

Overall, the application received an Impact/Priority Score of 40 and the committee recommended it for support with the budget as requested.

DESCRIPTION (provided by applicant): This application, in response to RFA-RR-09-008 proposes construction of a major addition to the Wisconsin National Primate Research Center (WNPRC). Additional housing and research space will accommodate a number of NIH-supported projects currently based in an older adjacent facility, the Harlow Primate Laboratory (HPL), as well as expand animal quarters for our ongoing aging, AIDS and reproductive biology studies. Inclusion of substantial projects from HPL in the new space will also enable more direct integration of its research emphasis on early development and on maternal and infant health within the larger rubric of our comprehensive husbandry and research programs. The merger of scientific programs and combining of resources has a number of significant mutual benefits. For the WNPRC, it adds 34 animal housing rooms, expands the main rhesus monkey colony by nearly 50%, and doubles breeding capacity to 200 infants per year. The developmental themes of the HPL program also perfectly complement the 3 major themes of investigation at the WNPRC, filling a scientific niche right after the early embryonic period. Our ongoing research includes projects on infertility, implantation and the biology of placenta, as well as stem cell derivation for regenerative medical applications. The enlarged building (including the Harlow Addition) will permit the relocation of 10 funded projects investigating prenatal infections, maternal nutrition, and fetal alcohol exposure, from a dated facility into a state-of-the-art, AAALAC-accredited space. Other benefits include increased security, integration of veterinary management, provision of uniform standards of care, and economic efficiencies with personnel and equipment sharing within a unified program. The University of Wisconsin- Madison (UW) is deeply committed to supporting this program integration and to making the building construction plan a reality. The institutional commitment is manifest most tangibly by the recent purchase of the land on which to construct the Harlow Addition. This RFA comes at a unique moment in time. With the goal of attaining this vision, the UW had conducted an extensive Master Plan review to chart future needs. As a consequence, we are positioned to begin construction with a shovel-ready project and have preliminary architectural and engineering plans in hand. The uniting of expertise in the behavioral sciences and biomedical research, substantiated through the creation of an enlarged facility, is in keeping with the core mandate of the RFA. Support for this project also fulfills the second mandate of the Recovery Act initiative in that the design and construction phase will create many jobs and meaningfully stimulate the local economy. Moreover, the enlarged facility will employ more research and caretaking staff, and foster the training of the next generation of scientists. Our project goes considerably beyond the bricks-and-mortar phase with long-term impacts and benefits. It will sustain the proud legacy of primate research and pioneering scientific discoveries at the UW by allowing us to provide optimal and appropriate care for the research animals in modern facilities.

CRITIQUE

Critique 1

Significance and Need: 2
Project Management and Institutional Commitment: 1
Design Considerations: 1
Equipment: 1
Environment: 1

Overall Impact

Strengths

- The proposed project has many strengths and few weaknesses.
- Although the application seeks support for the construction of an addition to the main housing facility of the Wisconsin National Primate Research Center (WNPRC), the proposed Harlow Addition (HA) will enable the University of Wisconsin to merge two strong biomedical research programs into one program with shared resources and infrastructure. It also will eliminate substandard animal housing facilities currently being used at the Harlow Research Laboratory (HRL).
- The proposed construction of the HA will allow a merger of research programs and animal care programs of the WNPRC and the HRL. It will have far-reaching benefits including the emergence of one infrastructure to serve the primate housing, management, and veterinary care of one of the most highly characterized breeding colonies of rhesus monkeys anywhere in the world. This colony is uniquely valuable to biomedical scientists.
- The merging of the primate colony of the HRL with that of the WNPRC will provide opportunities for new research collaborations by sharing scientific expertise.
- The construction of the proposed HA will provide the opportunity to greatly improve the care and living conditions of the 500 rhesus monkeys currently housed at the HRL.

Weaknesses

- The overall impact of the proposed project has no weaknesses.

Significance and Need

Strengths

- The need for better primate housing space for the Harlow Primate Laboratory (HPL) is clearly explained in the application.
- The HPL houses primates in outdated, substandard facilities that are not consistent with currently accepted standards. This application proposes to address the need for improved housing and procedures space by constructing an addition to Building 2 of the WNPRC that is located in close proximity to the HPL.
- The HPL has a well-supported and scientifically productive primate research program focusing on prenatal diseases using nonhuman primates to better understand the pathogenesis of these diseases.
- The nature of the research done by the HLP would benefit from high standards of care and environmental control. Improvements in housing are especially important.
- The WNPRC would address its needs by adding housing capacity to its program at a time when additional housing space is needed.

- The proposed project not only improves the physical facilities; it also creates improvements in the care and management of primates used in HPL research programs.
- Moving the 500 rhesus monkeys currently housed in the HLP to the proposed HA of the WNPRC will allow these animals to be part of an Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC)-accredited animal care program that will have access to the extensive infrastructure within the WNPRC.

Weaknesses

- Although the investigator group using animals at the HPL is well funded and productive, the HRL group that will directly benefit from this project is small. This minor weakness is offset by the far-reaching potential for collaboration that will be made possible by merging the animals and research programs of the HRL with the WNPRC.

Project Management and Institutional Commitment

Strengths

- The WNPRC administrative staff achieved direct and relevant experience in constructing an addition to Building 2 when they built the Building 2 East addition in 2001. The Building 2 East addition is a three-story addition similar to the proposed HA.
- The project will be managed by Martin Cadwallader, Ph.D., the Principal Investigator and Dean of the Graduate School; Joseph Kemnitz, Ph.D., the director of the WNPRC; Saverio Capuano, D.V.M., the attending veterinarian of the WNPRC; and the head of Facilities Management and Shop Services, all working in concert with the University of Wisconsin Facilities Planning and Management Office. This same arrangement resulted in the successful completion of the Building 2 East addition in 2001.
- The institutional commitment to this construction project and the resulting programmatic changes are strong. The merging of these two historically separate programs would not be possible without strong support from senior administrators of the institution.

Weaknesses

- None.

Design Considerations

Strengths

- The design of the HA will result in a seamless merging of the HA with Building 2. The existing functional areas have been integrated in the overall design to create an efficient use of space. The design layout has joined the two buildings through shared use of functional components of the HA and Building 2.
- A considerable strength of this design is that the research projects and monkeys currently maintained in the HRL will not be disrupted while the HA is being constructed. The transition of the animals and research activities can be accomplished by quickly moving into the new HA space once it is ready for occupancy.

Weaknesses

- None.

Equipment

Strengths

- The group led by Dr. Capuano is highly experienced in equipping primate housing and research facilities. The equipment requested is necessary and appropriate to accomplish the goals of the project.

Weaknesses

- None.

Environment

Strengths

- The research environment of the University of Wisconsin is among the best in the world. The institution has an international reputation of excellence in academic research with strong programs in biomedical research.
- Research programs that require nonhuman primates will benefit from the presence of the WNPRC and the University of Wisconsin's College of Veterinary Medicine.
- The University of Wisconsin is in the process of completing a major expansion of its biomedical research infrastructure with the multiphase construction of the Wisconsin Institute of Medical Research. This bold initiative has brought a massive new biomedical research complex to the university campus.
- It is difficult to imagine a better institutional environment for the proposed merger of the HRL with the WNPRC that will be embodied within the proposed construction of the HA.

Weaknesses

- None.

Biohazards

There are no biohazard concerns noted in the application.

Critique 2

Significance and Need: 3
Project Management and Institutional Commitment: 2
Design Considerations: 5
Equipment: 4
Environment: 6

Overall Impact

Strengths

- The project will discreetly increase animal housing to facilitate and support research needs while seeking to improve operations to ensure that NIH and AAALAC standards are met, along with the care and management of specific pathogen-free breeding colonies.
- The institution is committed to funding major facility improvement initiatives. A strong facility management team is in place.
- The application is a cohesive and well-presented package. Information is clearly shown between the existing and expansion plans. The project is an efficient use of the site.

Weaknesses

- Sustainable strategies are glossed over. There is an apparent lack of an integrated design.

- There is a lack of evidence that this project will provide as many jobs as stated or promote sustainability.

Significance and Need

Strengths

- The project will provide an additional capacity of specific pathogen-free breeding models used for prenatal research.
- The project will provide modern improvements and keep the research facilities up to date.
- The administrative consolidation of two nonhuman primate programs promotes efficiency.
- The project aims to promote collaboration and synergy among researchers.

Weaknesses

- None.

Project Management and Institutional Commitment

Strengths

- Land has been purchased, which confirms a significant commitment.
- The university has received state, alumni, and donor support.
- The university has a well-kept, well-managed campus. An overall campus sustainability program is in place.

Weaknesses

- None.

Design Considerations

Strengths

- The project design adheres to and supports the master plan strategies of 2005.
- The initiative to enhance employee morale by providing amenity space in vacated areas is commendable.
- The project is well thought out and executed in response to expansion and research needs. This is an efficient use of the site.

Weaknesses

- Offices opening into the lab areas do not facilitate safe or healthy practices.
- There is no mention of using sustainable or environmentally friendly finishes.
- There are no specific environmental criteria given for the individual spaces (temperature, relative humidity, air changes per hour).

Equipment

Strengths

- Casework and equipment will be relocated where feasible.
- The proposed cost for the new equipment appears reasonable.

Weaknesses

- There is no mention of any sustainable features (recycled content, Energy Star features).

Environment

Strengths

- The project will maximize the use of an existing site.
- The project is in support of critical adjacencies.
- Silver Leadership in Energy and Environmental Design (LEED) certification will be pursued.

Weaknesses

- There are no specific strategies identified. A LEED checklist is not included in the application.

Critique 3

Significance and Need: 6
Project Management and Institutional Commitment: 7
Design Considerations: 6
Equipment: 2
Environment: 6

Overall Impact

Strengths

- There will be a significant increase in breeding capacity in support of broad science programs.

Weaknesses

- There is an overly long design and construction duration prior to occupancy.

Significance and Need

Strengths

- The project will provide direct support of research programs in public health.

Weaknesses

- The institution has modest existing grant effects.

Project Management and Institutional Commitment

Strengths

- The general description of the project management principles appears adequate.

Weaknesses

- A 14-month design phase for 23,000 gross sq. ft. seems excessive and inefficient. An 18-month construction duration also seems excessive.
- No specific personnel or project management procedures are described.
- The conventional design-bid-build approach will lengthen the schedule and preclude collaborative team relationships essential for a complex renovation project.

Design Considerations

Strengths

- The proposed expansion will provide a significant increase in space and improvement in procedure space in a small addition.

Weaknesses

- The new suites are close to code limit for exit access distances and common path of travel limitations.
- The expansion provides little space for nonhuman primate enrichment programs or activities.
- There are no nursery or early socialization programs or spaces described to benefit animal well-being and health.

Equipment

Strengths

- The replacement of caging within both the addition and the existing space will provide significant improvements in animal well-being and health.
- The movable tables provide flexibility.

Weaknesses

- Detailed equipment cuts are not provided.

Environment

Strengths

- The project has a stated goal of LEED silver certification.

Weaknesses

- Sustainable principles are described, but no specific design features or LEED checklist are provided in the application.

Biohazards

A continued single-corridor system relies entirely on standard operating procedures. The locker and changing areas remain tight for personal protective equipment supplies and changing operations.

THE FOLLOWING RESUME SECTIONS WERE PREPARED BY THE SCIENTIFIC REVIEW OFFICER TO SUMMARIZE THE OUTCOME OF DISCUSSIONS OF THE REVIEW COMMITTEE ON THE FOLLOWING ISSUES:

COMMITTEE BUDGET RECOMMENDATIONS: The budget was recommended as requested.
