

REQUESTED AWARD INFORMATION

Project Director: Bob Rowland

Proposal #: 2008-00817
(Integrated Strategies to Control and Reduce the Impact of PRRS)

Recommended: \$ 1,200,000 for year 1: \$ 4,800,000 total)

Duration: 4 years

Start date: 30-45 days after approval by CSREES of documents listed below

TO: Peter Johnson PJohnson @csrees.usda.gov

Kim Whittet: Kwhittet@csrees.usda.gov

→ **Brief Responses to panel summary:**

1. Summarize a strategy to include participation by under-represented and/or minority institutions. Participation includes the opportunity to compete for funding due to broader RFA advertisement, as well as consideration to fill an advisory role within the management structure of the CAP. Two possible resources follow:

• **Association of 1890 Research Directors**

<http://www.umes.edu/ard/>

Carolyn B. Brooks (Executive Director)

University of Maryland Eastern Shore

Princess Anne, MMD 21853

Phone: (410) 200-4566

FAX: (410) 621-3550

Email: cbbrooks@umes.edu

• **Association of 1890 Extension Administrators**

<http://www.1890aea.org/>

L. Washington Lyons (Executive Administrator)

North Carolina A&T State University

PO Box 21928

Greensboro, NC 27420

Phone: (336) 340-6465

FAX: (336) 334-7432

Email: llyons894@msn.com

Brief Response

In addition to program development that includes consulting the contacts recommended by the panel, the CAP 2 Co-Project Director Dave Benfield will consult with the Assistant Director of the Ohio Agricultural Research and Development Center who has initiated a program of collaboration with the 1890 colleges and a representative on the North Central Experiment

Station Directors group that represents the 1994 land-grant colleges. Through these contacts the CAP management will do the following:

1. Obtain information on the best approach to contact and implement a communication plan with the 1890 and 1994 colleges and implement a communication plan to accomplish this. Dr. Gary Mullins at Ohio State University has experience in working with the 1890s colleges and the best approach to sending information to this group is through the Association of 1890 Research Directors and Extension Educators. Tribal Colleges will be contacted individually through the 1994 Director provided by Dr. Gary Halvorson, Division of Agriculture Director, Sitting Bull College Ft. Yates, ND.

2. Commit to at least three fellowships to minority or under-represented students to participate in the project.

3. Incorporate an under-represented and/or minority member to serve on the CAP2 Stakeholder Advisory Board. In this regard, we have recruited Professor Darryl Ragland, DVM, PhD to serve on the advisory board. Dr. Ragland is a DVM graduate of Tuskegee University School of Veterinary Medicine and is Chief of Production Medicine at Purdue University. He is a member of the American Association of Swine Veterinarians and a well-respected swine researcher and educator. He brings an added dimension to the PRRS CAP education and outreach activities.

2. Articulate a mechanism or strategy to ensure that interoperable databases are developed within the different objectives (1,3 and 4) of the CAP. In other words, assure that those involved with the database developments coordinate PRIOR to initiation so that each database team is “aware” of what the other is planning FROM THE OUTSET to make interoperability more easily doable in the future.

Brief Response

The sharing of reagents and data is the means to maintain transparency, avoid duplication, decrease the cost of research, promote collaboration and provide a resource for future data mining. The CAP2 management team understands the desire of the panel for the project data to be integrated into a single all encompassing database. It is not clear if a commercial database currently exists that would allow the flexibility to collectively express the diverse types of scientific data, such as numerical measurements, pictures, sequence information, etc. Significant steps are being taken to achieve this goal. One example is the use of both bar coding and phenotyping/genotyping relational databases, which are being developed by the PRRS Host Genetics Consortium (PHGC).

In the short-term, each investigator in the funded projects will be required to deposit appropriate data into an appropriate database in a timely manner. Access will be gained through the PRRS website. Data and reagent availability status will be monitored by the CAP2 management team.

The CAP Internal Advisory Committee, under the direction of David Benfield, will initiate the formation of a data sharing working group to explore database development and interoperability over the course of the project. At present, Objective 3 (genetics) has taken the lead in this area by adapting a commercial bar coding system for labeling and tracking samples and data. This

information will be fed into the comprehensive PRRS phenotyping and genotyping relational database being developed by the genetics group using CAP1 Big Pig data as the PRRS phenotype data source and the national animal genome (NRSP8) quantitative trait locus database (QTLdb; www.animalgenome.org/QTLdb/) for animal genotype. These databases will provide a working template for other databases. The genetics relational database is currently being developed with PHGC NPB grant funds and will be located and managed at Iowa State University taking advantage of genomics databases already operated through the national animal genome (NRSP8) bioinformatics program.

In terms of the PRRS CAP objectives, database interoperability is best suited for objectives 2 (epidemiology), 3 (genetics) and 4 (regional elimination). All three incorporate the study of large populations and collect similar types of data, such as immune status, infection status, etc. In the case of objective 1, data from all the different types of investigations proposed and delineated in the objective 1's logic model (i.e. sequence diversity, protein, genes, T and B epitope discovery, etc) will be made publicly available by use of the one universally available sequence data base: GenBank. From this source, appropriate data can be imported into other databases such as the PRRSV sequence database (put forth by Kay Faaberg under CAP1 with support from the NPB) which can be automatically populated from GenBank. Therefore, in the case of Objective 1, the single, universal data base to be used (Genbank) is continuously updated and automatically by contributions of the scientific community at large. As the PRRS CAP relational databases are expanded it is expected that they can be adapted for the unique needs required for host vaccination and challenge data storage. Moreover each CAP funded research group could control access to their subsets of the databases, maintained in a secure location, so that confidentiality can be maintained prior to publication and interoperability available after data release.

3. Revise the impact/outcome sections of Objectives 3 and 4 to be more clearly defined with attainable outcomes. For Objective 3, for example, the panel felt that with the time and resources available, establishing a phenotype of the experimentally PRRSV-infected pigs with characterization of viral load, immune responses, creation of tissue banks, etc. for use in future long term studies (genomic, translational, proteomic) would be a focused, achievable goal. If more is subsequently achieved in a particular year, the projected outcomes for the following year can be revised.

Brief Response

Under Objective 3 (genetics), the infection of pigs, collection/cataloging/bar coding of samples and the PHGC genetics (genotyping/phenotyping) relational database is organized by the Pig Host Genetics Consortium, with an estimated commitment of \$900,000 by the NPB swine health and animal science committees to achieve these specific goals. It should be noted that PHGC recognizes that the impact of genetic studies will occur in a time frame covering the next 5 to 10 years. CAP funds can be directed at specific projects involved in the analysis of samples. The PHGC relational database may provide a template for the much larger CAP database.

Below are modifications of the Objective 3 activity-outcome-impact table that reflect changes suggested by the panel and include more details of actual deliverables. If acceptable these and other modifications will be integrated into a revised proposal.

Revised Table for Objective 3				
Activity	Outcomes			Impact
	Short-term	Medium-term	Long-term	
Map gene response pathways altered by PRRSV infection and vaccination	<p>Incorporate RNA samples from Objective 1, 3 and other studies of infection and vaccination and immunity.</p> <p>Use tools, such as microarrays and RT-PCR, to identify genes whose expression are altered in response to vaccination and natural infection or are divergent in relation to pigs that exhibit distinct phenotypes to infection.</p>		<p>Identify gene response pathways that relate to protection (following vaccination) versus those involved in infection (pathogenesis).</p> <p>Identify gene response pathways that differ in pigs that exhibit distinct phenotypes to infection.</p>	<p>Develop vaccine and immunotherapeutic approaches that target host response pathways.</p> <p>Identify new host pathways that have importance in innate and adaptive immunity</p> <p>Unveil new pathways that cause pigs to be more susceptible to PRRSV infection</p>
Determine resistance/susceptibility of commercial U.S. swine to PRRSV infection	<p>The PRRS Host Genetics Consortium (PHGC) will infect pigs and collect samples from commercial pigs using an established experimental model.</p>	<p>Based on analysis of virus replication, immunity and performance, identify pigs that are 1) resistant to infection, 2) highly susceptible, or 3) tolerant (show no disease while supporting virus replication).</p> <p>Use tools, such as SNP chips, to identify allele variants that relate to the 3 different categories of infection.</p> <p>Input data into a relational database (described below)</p>		<p>Develop a set of gene markers that can be used for marker assisted selection based breeding of pigs that possess the desired infection response.</p>
Establish a tissue and sample repository for genetics and the other CAP objectives	<p>With the support of the PGHC, coordinate with other CAP objective researchers to retain samples collected under Obj. 2,3 and 4.</p>	<p>Implement a system to distribute samples to PRRS researchers involved in genetics, vaccinology, immunology and epidemiology</p>		<p>Establish a community asset that will be used to facilitate collaborative research and lessen the cost and decrease the lead time for future projects.</p>
Develop a database resource for genetics with application to other CAP objectives.	<p>Under the PHGC develop a relational database to capture genotypic and phenotypic data. Coordinate this activity with the CAP Internal Advisory Committee.</p>	<p>Input data from analysis of tissues and samples.</p> <p>Modify database to accommodate data collected from other CAP objectives.</p>	<p>Use statistical approaches, including tests of correlations of phenotypic parameters (virus load, immunity and disease) with genotypic markers.</p> <p>Develop “the interoperable database” concept for data collected by the other CAP objectives.</p>	<p>Bring together CAP data into a single transparent community asset that can be mined by future PRRS scientists.</p>

Modifications were also made to the Objective 4 Activity-Outcome-Impact table to address the comments of the panel. In terms of endpoints to guideposts to elimination, Dr. Morrison has identified five stages of elimination that can be used as markers for success.

Objective 4. Extension-Revised Table				
Activity	Outcomes			Impact
	Short-term Year 1	Medium-term Year 2-3	Long-term Year 4	
Support ongoing PRRSV control and elimination projects	Focus efforts on Stevens county by implementing stage 3-5 of the 5-step elimination process*	Obtain an estimate of the cost/benefits of elimination and publicize results	From the lessons learned, develop a protocol for other producer regions	Demonstrate to producers the practical benefits of elimination. Provide a road map for elimination
Implement new elimination projects	Recruit proposals for novel elimination efforts, methods, and ideas	Initiate new elimination projects	Apply results to existing elimination projects	Deliver new approaches for PRRSV control and elimination to producers
Analyze producer attitudes and knowledge on PRRSV control and elimination	Develop a survey instrument that can measure producer knowledge and attitudes	Deliver the survey to producers and collect results	Develop tools to educate producers on PRRS biosecurity and elimination. Integrate these tools into existing projects	Increase participation of producers in virus elimination programs. Enhance biosecurity awareness (performed in collaboration with Obj. 5, education)
Enhance PRRS biosecurity in the field (performed in collaboration with Obj. 3, epidemiology)	Utilize the PRRS Risk Assessment Tool in a pre-test post-test study. Apply tool to farms in Year 1 and then re-test the same herds in Year 3.		Collect post-test data and evaluate changes in biosecurity scores. Determine how and why risk scores have changed	Fill important gaps in PRRS biosecurity plans. Reduce economic losses through increased awareness

***5-Stage Process to PRRS Elimination in a Region**

Stage 1 - Exploratory - An individual/group has been identified as a swine production leader(s) in a region that has been proposed for elimination. All sites within this region that have commercial production have been identified. There are less than 5 swine sites that have PRRS positive or variable status pigs entering the region for growing out.

Stage 2 - Detection - At least 90% of commercial producers have signed the consent letter, at least 2/3 of sow herds have been tested for PRRS with a valid sample and are continuing to test at least every 6 months.

Stage 3 - Reduction - All owners of commercial sites are aware of their PRRS status and are actively working to eliminate PRRS virus from these sites. At least one site that receives pigs from a corresponding sow herd is tested for PRRS at least every 6 months.

Stage 4 - Monitoring - No sow herds are known to be infected with wild-type strains of PRRS virus. All remaining sites are free of PRRS or working towards becoming free. All owners of exhibition pigs have passed the NPB Exhibition Biosecurity program or have been certified by the CAP. At least one site that receives pigs from a corresponding sow herd is tested for PRRS at least every 3 months.

Stage 5 - PRRS Free - No sites are known to be infected with non-vaccine PRRS virus. At least one site that receives pigs from a corresponding sow herd is tested for PRRS at least every 6 months.

4. Summarize the strategy (including approximate timeline) that will be used for development of the pig model for vaccine studies. This would include arriving at an acceptable (to the community) definition for heterologous protection. Furthermore, given the important role that ecology and epidemiology of disease play in strategies for protection, it may be advantageous for a separate, but integrated epidemiological model to be developed as a natural extension of the vaccine model (or perhaps vice versa).

Brief Response

All of the goals proposed under Objective 1 (which involve the studies on vaccines, as delineated in the logic model) will be adequately approached using a single challenge system involving the infection of young pigs; commonly referred to as the nursery model. Parameters collected include; 1) quantitative determination of virus load (in blood and tissues), 2) scoring of lung lesions, 3) measurements of total and neutralizing antibody, 4) and weight gain.

This model is already in place and will be used for the initial screening of vaccine efficacy. Potential vaccine candidates will be tested using two challenge models: the nursery pig and pregnant sow as well. A detailed protocol for each model, including a working definition of heterologous protection will be developed within the first year.

We agree that an integrated epidemiological model making use of the data generated in Objective 1 would be highly desirable. In fact, the baseline data on immunity, heterologous protection, and vaccine efficacy that will be collected as part of Objective 1 would be essential for parameterizing such a model. Although the design, parameterization, and validation of such a model are beyond the scope of Objective 1, it is well within the scope of Objective 4. Formal and informal discussions will be initiated by the Internal Advisory Committee to further examine the integration between vaccinology and epidemiology.

5. The CAP should indicate willingness to initiate a dialogue with APHIS-CVB and biopharma industry relative to vaccine and diagnostics development at initiation of CAP2. One way to accomplish this may be through specific designation or assignment within the CAP management structure of a liaison who initiates a dialogue with APHIS-CVB shortly after PRRS CAP2 initiation.

This comment is very appropriate. The CAP will contact the Director of the CVB/APHIS/USDA, to identify the most appropriate member or representative of CVB who will be invited to join vaccine discussions from the onset.

7. Summarize how CAP2 will formalize interactions between the vaccine and diagnostic focus subgroups to foster more intimate interactions that might not otherwise “naturally” occur at larger group meetings. In other words, the panel believes it is important for at

least one dedicated meeting or workshop to occur each year for the vaccine and diagnostic groups.

Brief Response

This is an excellent opportunity to remind the reviewers to the fact that under the PRRS CAP there is already a natural clustering and close interaction between vaccine and diagnostic groups. Many investigators are actively involved in both areas. It should be noted that under the CAPs more focused prioritization of research under just four major points or objectives (1. Vaccine/immunology, 2. Disease Ecology, 3. Genetic resistance, and 4. Extension/Regional pilot projects) the diagnostic and vaccine personnel are fused into one group. Importantly, the reviewers suggested a focused meeting of the vaccine sub-project and indicated that both diagnostic and vaccine investigators should attend.

- a. The management team will plan to have an annual meeting of individuals most involved in vaccine and diagnostics. This could be accomplished in the form of a satellite meeting prior to the International PRRS Symposium in December. In addition to domestic PRRS experts, the symposium typically brings together international scientists, who can lend their input.
- b. In addition to scientists attending this meeting, we will invite biologic companies and companies manufacturing diagnostic reagents or kits.
- c. The CAP management team will assign a chair and co-chair to establish an agenda for these meetings.

8. Please indicate the approximate date of the 1st PRRS CAP 2 annual meeting that will bring together all funded PRRS CAP 2 investigators, as well as the stakeholder board. At this initiation stage, it is acceptable to indicate spring, summer, fall, winter. The annual meeting should be separate from the very successful International PRRS Symposium held during CRWAD each year so that neither effort is diluted.

Brief Response

The first meeting could be held as early as fall 2008, after the identification of funded projects. After that initial meeting, the ideal next meeting time would be summer. For example, in early June is the World Pork Expo in Des Moines. Bringing together CAP researchers, educators and Extension prior to the expo would provide the opportunity for maximum stakeholder involvement and allow CAP participants to be involved in expo activities, i.e. a terrific outreach opportunity. This meeting would be separated by six months from the PRRS symposium in December.

9. Also, please comment on the following suggestion (note: implementation is not a requirement): The program urges PRRS CAP 2 to initiate a dialogue with NPB to determine if it is feasible within the constraints of NPB funding and policy to include some or all of the NPB funded researchers in the PRRS CAP 2 annual meetings.

Brief Response

This is a great idea. The road map for PRRS control is a community roadmap involving the participation of all stakeholders including CAP researchers, the NPB and the American Association of Swine Veterinarians. Research, education and extension participation at the CAP annual meeting will feature reports and interactions with all three groups. One outcome will be a published compendium on the status of PRRS research, Extension, education and outreach.

BUDGET

Similar to PRRS CAP1, the proposal is recommended as a continuation award. Once approved by the Awards Management Branch, the PD and co-PD justified budget item funds will be released. Subcontract funds will be withheld until CSREES receives their budgets and justifications. In years 2, 3 & 4, justified budget pages for the next year's efforts will be submitted to CSREES for approval. **With year 2, 3 and 4 budgets and objectives, a written evaluation from the Advisory Board should be included.**

→ ASSURANCE STATEMENT

IACUC approval for animal use from Kansas State University was listed as pending. An approval date and number are needed prior to releasing funds related to subcontracts that include animal use. NOTE: Kansas State University is responsible for documenting and maintaining assurance statements from subcontracting institutions for animal use, but does not submit those to the USDA.

A letter of assurance is attached

→ UPDATED CURRENT AND PENDING RESEARCH SUPPORT (OMB 0524-0039)

Instructions: The Project Director and each co-Project Director includes this proposal (PRRS CAP2) on the pending list of each form. The PRRS CAP2 proposal budget is listed as \$4,800,000 with the individual's % of time committed to the CAP.

Based on a review of the PRRS CAP2 proposal, Three Current and Pending Research Support Forms need to be updated:

- (1) Murphy – Must list this proposal as pending (see citation on attached C&P form)
- (2) Morrison – Must list this proposal at the full \$4.8M amount and % of time commitment to full project
- (3) Zaabel – Need % of time commitment for full project

Appropriate forms have been updated. Lisa Becton of the National Pork Board is replacing Pam Zaabel as the NPB CoPI and liaison. Her biographical sketch, current and pending, conflict of interest forms are attached.

→ ELECTRONIC SUBMISSION OF CURRENT RESEARCH INFORMATION SYSTEM (CRIS) FORMS AD-416 and AD-417.

These forms must be completed and submitted to the CRIS office via the CRIS Web Forms site. The renewal will receive a NEW award number. CSREES will not finalize

award processing until the completed CRIS AD-416 and AD-417 forms have been submitted and are processed by the CRIS Office. (After submission, notify us by email). **For specific instructions on Web submission of CRIS forms, please see the “General Instructions for the Completion of CRIS Forms” at the end of this email .**

CURRENT RESEARCH INFORMATION SYSTEM (CRIS)

General Information on CRIS: The CRIS database is an inventory of agricultural research maintained by USDA/CSREES. The CRIS database is widely used to describe research focus and to evaluate success by the federal, state, local and private sectors. Careful, clear and concise reporting, including well thought-out impact statements, is very important. USDA will use your annual reports to monitor and evaluate progress, in addition to informing Congress, the scientific community, and the public. Your award will be posted on the CSREES Web site, with a direct link to CRIS reports (initial, annual, termination).

The **Non-Technical Summary** (CRIS Form AD-416, section 23) enhances the usefulness of the database, especially to legislative and other public audiences. It should be written to be readily understandable by a person not in the field of the project’s focus. Abbreviations and language not generally known to the broader science community should be avoided or clearly defined. It is especially important to summarize the significance of this project (e.g., potential applications to an industry and/or the public). The Non-Technical Summary is limited to 1600 characters, including punctuation and spaces.

Detailed General Instructions are provided below for completion of the forms. The completed forms should be submitted electronically using the CRIS Web Forms site at: <http://cwf.uvm.edu/cris>. Questions with regard to the submission of the CRIS forms should be directed to Carolyn Deckers (email: cdeckers@csrees.usda.gov; telephone: 202-690-0009). Questions with regard to the scientific aspects of your CRIS information should be directed to the National Program Leader responsible for your award.

PLEASE NOTE: The Terms and Conditions of your award specify that completed CRIS forms are required. **CSREES will not release funds for the proposed award until the completed CRIS forms are submitted to CRIS.** Therefore, your prompt action on this requirement is essential for the initiation of your project.

Your cooperation in this process will be greatly appreciated.

GENERAL INSTRUCTIONS FOR THE COMPLETION OF CRIS FORMS

1. **State Agricultural Experiment Station, 1890 University, State Forestry School, or College of Veterinary Medicine:** Awardees affiliated with a State Agricultural Experiment Station, 1890 University, State Forestry School, or College of Veterinary Medicine are required to coordinate completion of the CRIS AD-416 and AD-417 with the Research Director/Dean's office. CRIS forms for these cooperating state institutions must be completed and submitted via the CRIS Web Forms site administrator.

2. **All Other Awardees (including awardees at USDA Research Agencies):** All other awardees (not affiliated with 1 above) are Non State Cooperator Grantees and should complete all required fields as noted at the CRIS Web Forms site: <http://cwf.uvm.edu/cris>; the participating site is NSCG; the password is **oneworld**.

Enter items 21 (OBJECTIVES), 22 (APPROACH), 23 (NON-TECHNICAL SUMMARY), and 24 (KEYWORDS) on the AD-416 Form in accordance with the following instructions. All items on the attached AD-417 Form listed below have been completed by the CSREES National Program Leader, are to be used as reference, and should not be changed. **Please note** that you will need to enter the information on the AD-417 Form.

You must complete both CRIS AD-416 and AD-417 Forms and click on the “FORMS COMPLETE” BUTTON. PLEASE NOTE: CLICKING ON THE “FORMS COMPLETE” BUTTON IS IMPERATIVE TO INSURE SUBMISSION OF THE FORMS TO CRIS. Please contact Carolyn Deckers (cdeckers@csrees.usda.gov; 202-690-0009) for assistance.

AD-416

ITEM 21 (OBJECTIVES): Enter a clear, concise statement of the objectives of the research. Objectives should be specific and attainable within the duration of the project using the resources available. Restrict the statement to the main thrusts of the research.

ITEM 22 (APPROACH): Describe the ways in which the research is to be conducted, with emphasis on the scientific methods and any unique aspects or significant departures from usual approaches. Avoid detailed description of standard methods.

NOTE: OBJECTIVES AND APPROACH SECTIONS SHOULD NOT EXCEED 3,200 CHARACTERS EACH, INCLUDING PUNCTUATION AND SPACES. Longer presentations risk truncation.

ITEM 23 (NON-TECHNICAL SUMMARY): This abstract is meant for a general audience, and it should present both the situation the research addresses and the purpose of the project. The requested style is that of *Scientific American*, and the length should be no more than 250 words (approximately 1600 characters, including punctuation and spaces). Longer presentations risk truncation.

ITEM 24 (KEYWORDS): The assignment of appropriate keywords is aimed at improving retrieval of project information. Collectively, the keywords for a given project should resemble an abbreviated abstract of the project narrative. Choose keywords that describe the nature of the study. The maximum length of a keyword, including hyphens within multi-term keywords, is 30 characters.

**UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE**

OMB approved 0524-0039

ASSURANCE STATEMENT(S)

STATEMENT OF POLICY - Institutions receiving CSREES funding for research are responsible for protecting human subjects, providing humane treatment of animals, and monitoring use of recombinant DNA. To provide for the adequate discharge of this responsibility, CSREES policy requires an assurance by the institution's Authorized

Organizational Representative (AOR) that appropriate committees in each institution have carried out the initial reviews of protocol and will conduct continuing reviews of supported projects. CSREES also requires AOR certification by citing a timely date that an appropriate committee issued an approval or exemption.

NOTE: Check appropriate statements, supplying additional information when necessary.

1. INSTITUTION

Kansas State University

2. CSREES PROJECT NUMBER OR
AWARD NUMBER (if known)

Proposal # 2008-00871

3. PROJECT DIRECTOR(S)

Raymond Robert R. Rowland

4. TITLE OF PROJECT

Integrated Strategies to Control and Reduce the Impact of PRRS

A. BIOSAFETY OF RECOMBINANT DNA

Project does not involve recombinant DNA.

Project involves recombinant DNA and was either approved (X) or determined to be exempt () from the NIH Guidelines by an Institutional Biosafety Committee (IBC) on _____ (Date).

This performing organization agrees to assume primary responsibility for complying with both the intent and procedures of the National Institutes of Health (NIH), DHHS Guidelines for Research Involving Recombinant DNA Molecules, as revised.

B. CARE AND USE OF ANIMALS

Project does not involve vertebrate animals. **(The KSU portion of work will not involve vertebrate animals. Kansas State University will be responsible for documenting and maintaining assurance statements from subcontracting institutions.)**

_____ Project involves vertebrate animals and was approved by the Institutional Animal Care and Use Committee (IACUC) on _____ (Date).

This performing organization agrees to assume primary responsibility for complying with the Animal Welfare Act (7 USC, 2131-2156), Public Law 89-544, 1966, as amended, and the regulations promulgated thereunder by the Secretary of Agriculture in 9 CFR Parts 1, 2, 3, and 4. In the case of domesticated farm animals housed under farm conditions, the institution shall adhere to the principles stated in the Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching, Federation of Animal Science Societies, 1999.

C. PROTECTION OF HUMAN SUBJECTS

Project does not involve human subjects.

Project involves human subjects and

_____ Was approved by the Institutional Review Board (IRB) on _____ (Date). Performing Institution holds a Federalwide assurance number _____; if not, a Single Project Assurance is required.

_____ Is exempt based on exemption number _____

_____ Specific plans involving human subjects depend upon completion of survey instruments, prior animal studies, or development of material or procedures. No human subjects will be involved in research until approved by the IRB and a revised Form CSREES-2008 is submitted.

This performing organization agrees to assume primary responsibility for complying with the Federal Policy for Protection of Human Subjects as set forth in 45 CFR Part 46, 1991, as amended, and USDA regulations set forth in 7 CFR 1c, 1992. All nonexempt research involving human subjects must be approved and under continuing review by an IRB. If the performing organization submits a Single Project Assurance, supplemental information describing procedures to protect subjects from risks is required.

SIGNATURE OF AUTHORIZED ORGANIZATIONAL REPRESENTATIVE



Paul R. Lowe

TITLE

Assistant Vice President
for Research

DATE

5/6/08

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0524-0039. The time required to complete this information collection is estimated to average .50 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

CURRENT & PENDING SUPPORT

Name: James Patrick Murphy

Instructions:

Who completes this template: Each project director/principal investigator (PD/PI) and other senior personnel that the Request for Applications (RFA) specifies

How this template is completed:

- Record information for active and pending projects, including this proposal.
- All current efforts to which PD/PI(s) and other senior personnel have committed a portion of their time must be listed, whether or not salary for the person involved is included in the budgets of the various projects.
- Provide analogous information for all proposed work which is being considered by, or which will be submitted in the near future to, other possible sponsors, including other USDA programs.
- For concurrent projects, the percent of time committed must not exceed 100%..

Note: Concurrent submission of a proposal to other organizations will not prejudice its review by CSREES.

NAME (List/PD #1 first)	SUPPORTING AGENCY AND AGENCY ACTIVE AWARD/PENDING PROPOSAL NUMBER	TOTAL \$ AMOUNT	EFFECTIVE AND EXPIRATION DATES	% OF TIME COMMITTED	TITLE OF PROJECT
	Active:				
Murphy, Beckman,	USDA 25-6309-0030-022	\$27,936	04/01/08- 03/31/09	1%	SARE Associate Coordinator, Professional Development Program
Hargrove, Devlin, Boone, Cable, Griffith, Harner, Melgares, Murphy	US Environmental Protection Agency 2004-0014 Amd. 92	\$513,203	10/1/05- 6/30/10	9%	Abatement of Fecal Coliform Bacteria-Part 5B
Murphy, Beckman	USDA Q4089043701	\$50,000	02/08/07- 12/31/08	1%	Kansas SARE Professional Development Program
Murphy, Beckman	USDA 25-6309- 0030-012	\$50,000	07/01/05- 09/30/08	1%	Kansas SARE Professional Development Program
Murphy	USDA 2K51B 135	\$328,900	10/01/00- 09/30/10	1%	Renewable Resources Extension Act Program
Harner, Barnes, Clark, Murphy, Powell	US Environmental Protection Agency	\$108,570	7/1/04- 6/30/08	12%	Waste Management Water Quality Protection Learning Center-Part 3
Murphy	USDA Q4089043101	\$78,406	07/01/06- 06/30/08	1%	NCR-SARE Regional Professional Development Program

Murphy, Barnaby, Dumler, Mintert, O'Brien	USDA 1270	\$4,778,952	01/01/95- 09/30/08	1%	Kansas Agricultural Mediation Service
Goodin, Harrington, Hargrove, Fick, Ham, Murphy	USDA 2008-55112- 18801	\$596,424	02/01/08- 01/31/011	1%	Develop a Fire and Smoke Management Program to Minimize Impact of Prescribed Rangeland Burning in the Central Plain
Rowland, Benfield, Morrison, Murphy, Becton	Pending: USDA PRRS CAP II	\$4,800,000	4/1/08- 3/31/12	5%	Integrated Strategies to Control and Reduce the Impact of PRRS Virus (This Proposal)

CURRENT & PENDING SUPPORT

Name: Robert Morrison

Instructions:

Who completes this template: Each project director/principal investigator (PD/PI) and other senior personnel that the Request for Applications (RFA) specifies

How this template is completed:

- Record information for active and pending projects, including this proposal.
- All current efforts to which PD/PI(s) and other senior personnel have committed a portion of their time must be listed, whether or not salary for the person involved is included in the budgets of the various projects.
- Provide analogous information for all proposed work which is being considered by, or which will be submitted in the near future to, other possible sponsors, including other USDA programs.
- For concurrent projects, the percent of time committed must not exceed 100%..

Note: Concurrent submission of a proposal to other organizations will not prejudice its review by CSREES.

NAME (List/PD #1 first)	SUPPORTING AGENCY AND AGENCY ACTIVE AWARD/PENDING PROPOSAL NUMBER	TOTAL \$ AMOUNT	EFFECTIVE AND EXPIRATION DATES	% OF TIME COMMITTED	TITLE OF PROJECT
R.B. Morrison	Active: Rapid Response: 1543-392-2884	\$33,494	7/1/06- 12/31/07	1%	PRRS Risk reduction in endemically infected regions of MN
	National Pork Board: 1744-669-6375	\$17,044	12/15/06- 12/15/07	5%	Analysis of prevalent environmental conditions in cases of suspected PRRSV lateral transmission between pig farms
	Boehringer Ingelheim: 1743-669-6379	\$25,000	3/1/07- 2/28/08	2%	Experimental quantification of PRRSV transmission
	USDA-APHIS 1716-669-6384	\$125,551	4/1/07- 12/31/07	10%	Regional Eradication of PRRS virus-a pilot project
	UROP Project 1003-669-5919	\$1,700	7/2/07- 10/26/07	1%	Quality of Tissue Extract being produced by Veterinary Clinics to control Porcine Circovirus Associated Disease
R.B. Morrison	Pending: National Pork Board	\$29,970	5/1/08- 4/30/09	3%	Effect of training, financial incentive and attitude on treatment frequency and mortality rate of growing pigs
Rowland, Benfield, Murphy, Morrison, Becton	USDA PRRS CAP II (This proposal)	\$4,800,000	4/1/08- 3/31/12	5%	Integrated Strategies to Control and Reduce the Impact of PRRS Virus

CURRENT & PENDING SUPPORT

Name: Lisa J. Becton

Instructions:

Who completes this template: Each project director/principal investigator (PD/PI) and other senior personnel that the Request for Applications (RFA) specifies

How this template is completed:

- Record information for active and pending projects, including this proposal.
- All current efforts to which PD/PI(s) and other senior personnel have committed a portion of their time must be listed, whether or not salary for the person involved is included in the budgets of the various projects.
- Provide analogous information for all proposed work which is being considered by, or which will be submitted in the near future to, other possible sponsors, including other USDA programs.
- For concurrent projects, the percent of time committed must not exceed 100%..

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NAME (List/PD #1 first)	SUPPORTING AGENCY AND AGENCY ACTIVE AWARD/PENDING PROPOSAL NUMBER	TOTAL \$ AMOUNT	EFFECTIVE AND EXPIRATION DATES	% OF TIME COMMITTED	TITLE OF PROJECT
	Active: None				
Rowland, Benfield, Morrison Murphy, Becton	Pending: USDA, CSREES, Proposal # 2008- 00817 (This proposal)	\$4,800,000	05/01/2008 – 04/30/2012	5%	Integrated Strategies to Control and Reduce the Impact of PRRS

Lisa J Becton, DVM
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Des Moines, IA 50306
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Professional History

April 2008 – Present Director of Swine Health Information and Research, National Pork Board
Des Moines, IA
Sept. 1996 – March 2008 Health Assurance Manager, Premium Standard Farms, Princeton, MO
June 1995 – Sept 1996 Staff Veterinarian, HANOR Farms, Rocky Mount, NC

Education

1986-1990 Bachelor of Science – Biology, Lenoir-Rhyne College, Hickory, NC
1990-1994 Doctor of Veterinary Medicine-North Carolina State University, Raleigh, NC
1994 -1995 Swine Internship Joint Cooperation, NCSU and HANOR Company, Rocky Mount, NC
1998 -2000 Executive Veterinary Program – Swine Management, University of Illinois, Champaign, IL
Spring 2002 Foreign Animal Disease Diagnostician School, Plum Island, NY
Fall 2007 - Online ProMS Food Safety Program, Michigan State University

Professional Activities:

AVMA Liaison to NFID, Antimicrobial Resistance Conf.	2007 - current
Pharmaceutical Issues Task Force, AASV	2003 - current
Clinical Practitioners Advisory Committee, member	2004 – current
Clinical Practitioners Advisory Committee, alternate	2002 - 2004
Mercer County Emergency Management Team	May 2002 – current
Region H RHSOC Agriculture Representative	April 2007 - current
Missouri Emergency Management Team participant	May 2002 – current
AASV Foreign Animal Disease Committee	June 2002 – 2007
North American PRRS Eradication Task Force	June 2006 – current

Memberships in Professional Organizations:

American Association of Swine Veterinarians	June 1994 – current
American Veterinary Medical Association	June 1994 – current
Missouri Veterinary Medical Association	June 1997 – current

Current Veterinary Licensure:

Missouri - good standing	December 1996 – current
Iowa – good standing	July 1999 – current
North Carolina – good standing	June 1994 – current
Federal and Missouri DEA registration - good standing	June 1994 – current