ANNUAL STATION REPORT: PROJECT NC-229

Important: Please note that this report has been reformatted this year to primarily highlight MULTI-STATE efforts, as requested by USDA

PERIOD COVERED: November 30th, 2021, to December 1st, 2022

INSTITUTION OR STATION: (University, City, State, Zip)

A. Personnel

1) NC-229 STATION REPRESENTATIVE (*name, position, email*):

2) Other PRINCIPAL LEADERS associated with the projects (*name, position, email*):

3) Staff and students **(***name, position, email)*

4. New members added if any: (*name, position, email*)

**Project Objectives:**

**Objective 1. CONTROL OF PRRSV: 1**.1. PRRS immunology/vaccinology, 1.2. PRRS epidemiology,

1.3. PRRS Surveillance and Diagnostics.

**Objective 2 Developing effective and efficient approaches for detection, prevention and control of pressing viral diseases of swine of recent emergence: 2.1 ASFV, 2.2: Swine Influenza Virus, 2.3 Porcine Circovirus, 2.4 Swine Pestiviruses, 2.5: Senecavirus, 2.6:  Sapelovirus, 2.7: Viruses with potential interest to Xeno-transplantation science.**

**1.ACCOMPLISHMENTS:** Section 1 focuses on **multi-state** activities, outputs, and milestones, pertaining to the project objectives listed above. The report should reflect items that stakeholders want to know or see. Provide evidence of linkages within NC229 as well as to external peer groups, stakeholders, clientele, and other multistate activities. Please incorporate **CONCISE BULLET STATEMENT(S)** in numeric order for each section. The requested information and examples are provided in blue text.

**1a. Short-term multi-state Outcomes:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding measurable benefits of the multi-state research outputs as experienced by those who receive them. Examples: adoption of a technology, the creation of jobs, reduced cost to the consumer, less pesticide exposure to farmers, or access to more nutritious food.

**1b.Multi-state Outputs:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding defined products (tangible or intangible) that are delivered by a multi-state research project. Examples of outputs are reports, data, information, observations and patents. NC229 example: The survival and transmissibility of AFSV in animal feed was determined, along with information on specific feed ingredients that either promote or inhibit viral replication.

**1c**. **Multi-state Activities:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding organized and specific **multi-state** functions or duties carried out by individuals or teams using scientific methods to reveal new knowledge and develop new understanding. NC 229 example: The Swine Disease Reporting System (SDRS) has been providing monthly reports through multiple platforms (newsletters, podcasts, and YouTube videos) of the major disease trends thus providing the opportunity to forecast the behavior of different diseases in specific production areas of the country

**1d.Milestones:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding key milestones achieved in managing complex projects at your station for delivering the outputs of multi-state projects, within an agreed timeframe. For example, a milestone for a biotechnology project might be "To reduce our genetic transformation procedures to practice by December 2004." NC229 example: Compete the development of qPCR panel for multi-FAD detection by June 2020”

**2. Impact Statements:**

**2a.Multi-State Impacts:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding the beneficial economic, social, health or environmental consequences for the intended users or the payoff to society. Indicators of such benefits can direct (e.g. improved human nutrition for so many individuals through genetically engineering rice to contain the precursors to vitamin A) or indirect when direct measurement of performance is difficult, too costly, or not possible (e.g an indicator of cultivar adoption might be seed certification records, rather than actual land area planted to that cultivar). NC 229 example: Major impacts from multi-state efforts included 1) improvements in the dissemination of information regarding trends in animal infections through SDRS 2) the development of models to inform best practices on the formulation and transport of animal feed to reduce the risk of FAD introduction via feed and feed ingredients.

***2b****.* **Multi-state grants or awards**: List any multi-state grants, contracts, and/or other resources obtained by one or more project members or stations as a result of the NC229 activities. Include the recipients, funding source, amount awarded and term if applicable for the current year of the project.

**3. Publications:** List the publications resulting from **multi-state** efforts at your station for **current** year only (with the authors, title, journal series, etc.). Single state efforts can only be listed if they are highly impactful.

**Publication format** (**IMPORTANT)**: To help with consistency and save time and effort for the executive board members in compiling the annual report, please use the [PUBMED](https://www.ncbi.nlm.nih.gov/pubmed/) format to list your publications. Click [HERE](https://www.ncbi.nlm.nih.gov/pubmed/) to search for publications. Type the name, click search. Select publications from the search results by clicking a check box for each publication. Next, in the “Format” tab at the top of the page, select “Summary (text)” from the drop-down menu. Your summary will appear. Copy and paste this publication summary in numeric order. If your publication is not listed on PUBMED, please modify format to match as much as possible with PUBMED format (eg., doi or PMID is not necessary).

1. Refereed Publications
2. Abstracts or Proceedings
3. Book Chapters or Monographs
4. Non-refereed Articles

**4.Work planned for next year**:

**5. CHANGES/ PROBLEMS DUE TO COVID-19:** Please incorporate **CONCISE BULLET STATEMENT(S)** regarding major problems or delays that may have a significant impact on the rate of expenditure; significant deviations from research schedule or goals; unexpected outcomes; or changes in approved protocols for the use or care of animals, human subjects, and/or biohazards encountered during the reporting period