



2018 Request for Pre-Proposals

Dear Interested Parties:

The Alliance for Research and Innovation in the Rendering and Pet Food Industries (Pet Food Alliance; PFA) has collaborated with Colorado State University to carry out targeted research in areas of interest for both the Rendering industry and the Pet Food Industry. The Alliance brings members of the pet food and rendering industries together with researchers to collaboratively identify research challenges, discuss realistic and implementable solutions, and explore novel funding mechanisms. Its primary goals include the building of a professional network, identifying research challenges and priorities and identifying potential science based solutions from research results.

In initial Alliance meetings, enhancing the understanding regarding the presence and mitigation of microbiological hazards in the rendering and pet food industries was identified as a core challenge. In that regard, the Pet Food Alliance has drafted a series of requests for pre-proposals (RFP) targeting topics related to prevention and mitigation of biological and chemical hazards in rendered products. This particular RFP is focused on intervention strategies that will eliminate or significantly reduce microbiological and chemical hazards in rendered fats, specifically, rendered fats used or applied after the thermal process in pet food production.

PROBLEM STATEMENT

Recent estimates suggest that over 25 million tons of raw animal materials are rendered in the U.S. and Canada each year (Informa Economics, 2011). The utility of the rendering practice towards the efficiency and sustainability of the meat industry is tremendous (Meeker and Meisenger, 2015). Complementary to this, assuring the safety of products generated from rendering operations is of paramount importance to the industry. In this regard, many rendering companies have taken a proactive stance in assuring the safety of their products, as is evident by the industry-wide programs (Rendering Code of Practice) and testing/monitoring practices (National Renderers Association, 2014). These programs have noted the industry's success in eliminating the threat of foodborne pathogens found in raw materials (Troutt et al., 2001).

Without question, the rendering and pet food industries have a history of concerted efforts towards the mitigation of biological, chemical and physical hazards in their ingredients and finished products. Although previous data certainly demonstrates tremendous reductions in microbial populations during rendering, previous research has noted the recontamination and persistence of pathogens in rendered ingredients and pet food products following processing. Additionally, recent findings of chemical contaminants in rendered and pet food products highlights the diversity of safety challenges facing the industry.

To date, the mechanisms by which microbiological, chemical and/or physical hazards are introduced into and persist within a complex oil matrix aren't well understood. Thus, efforts towards understanding the routes of introduction into, distribution within, and influence of physical and environmental parameters on these hazards—and their persistence—within rendered animal fats and pet food products is an imperative component in the development of targeted interventions to assure a safe finished product.

PURPOSE

The Pet Food Alliance is soliciting pre-proposals from scientists and researchers that would address the problem statement described previously. The proposed projects should target eliminating or significantly reducing microbiological hazards (such as *Salmonella*) and or chemical hazards (such as

pentobarbital) or physical hazards (such as hair, feathers, gloves, etc.) from rendered fats, proteins or meals (poultry, beef, pork, lamb). Interventions may include traditional means of heat, use of acids or even use of novel ingredients or technologies. The research findings will be used to help the pet food and rendering industry provide quality and safety to all potential end users by mitigating the risk of the presence of biological, chemical or physical hazards in rendered fats.

PROCESS AND PRE-PROPOSAL INSTRUCTIONS

Pre-proposals will be reviewed by members of the Pet Food Alliance, with guidance from industry partners involved in the Fats and Protein Research Foundation and Pet Food Institute. Selected pre-proposals will be recommended for a more comprehensive proposal, with targeted guidance provided by members of the Pet Food Alliance. Successful pre-proposals should be clear, concise, and as detailed as possible.

Current issues/ideas within the pet food and rendering industries to consider:

- Microbiological reduction and/or elimination of pathogens;
- Impact of safety interventions on quality attributes such as oxidation, moisture, palatability;
- Industry feasibility/application and scalability;
- Cleaning and sanitization strategies for dry or low moisture product environments.
- Other topics which may reduce the risks of physical, chemical, and biological hazards associated with rendered products or pet food products.

Pre-proposals should not exceed two pages in length (not including curriculum vitae). Each pre-proposal should include the components below. Pre-proposals should be single-spaced, with 1 inch margins and 12-pt font.

- Investigator(s) Contact Information (title, organization, address, phone, email—not included in page limit)
- Project Title;
- Research Objectives;
- Brief Description of Research Project;
- Benefit of Research to Industry and Plans for Industry Implementation/Use;
- Approximate Cost of Research (there is no set budget target; however, pre-proposals selected for full proposal development will be asked to provide a budget justification);
- Approximate Research Timetable;
- Brief Curriculum Vitae (no more than 2 pages) for PI and All Collaborators (not included in page limit)

Proposals should adhere to the indirect costs policies outlined by the Fats and Protein Research Foundation, which state that proposals must not include salary and fringe benefits for professional staff members or other university overhead.

Completed pre-proposals (including CVs) should be submitted in Microsoft Word to cas_pfa@colostate.edu by 5pm MST on May, 11, 2018. Late pre-proposals will not be accepted.

Evaluation of pre-proposals will be completed by the end of June 2018 and successful investigators will be expected to submit full, comprehensive proposals by 5pm MST on August 15, 2018.