

Center for Food Safety and Security Systems (CFS³) /Joint Institute for Food Safety and Applied Nutrition (JIFSAN) at the University of Maryland

Intramural Research Program

Call for Proposals for Fiscal Year 2009/2010

The Center for Food Safety and Security Systems (CFS³) and the Joint Institute for Food Safety and Applied Nutrition (JIFSAN) are pleased to announce, that subject to availability of funds, its intention to support a total of six research projects up to \$150,000 each (plus indirect costs for JIFSAN projects). The funds can be used for a period of up to two years. Projects are to be awarded by August 15, 2009 and must be initiated by September 1, 2009. The purpose of this research support is to provide researchers at the University of Maryland with an opportunity to conduct preliminary research that will allow them to develop and submit multi-disciplinary research proposals to external funding sources (e.g., NIH, USDA/AFRI, NSF, private foundations, venture capital/SBIR funding). The availability of these funds requires that the principle investigator commit to developing and submitting in collaboration with CFS³/JIFSAN at least one proposal within the two-year duration of the project. The priority research areas that CFS³ and JIFSAN are seeking proposals are provided below.

JIFSAN

The Institute was established between the U.S. Food and Drug Administration (FDA) and the University of Maryland (UM) in April 1996 and recently became part of the overall organizational structure of CFS³. The Institute is a jointly administered, multidisciplinary research and education program and includes research components from the FDA Centers for Food Safety and Applied Nutrition ([CFSAN](#)) and Veterinary Medicine ([CVM](#)), and UM.

JIFSAN fosters the missions of FDA and the University through the creation of partnerships to increase the quantity and quality of research and provide a scientific basis for ensuring the safety of our food. It promotes food safety, human nutrition, and animal health and production through an integrated academic, education, and outreach program, which includes opportunities for collaborative research between UM faculty and the scientists from the FDA CFSAN and CVM. Projects undertaken under the auspices of the current funding opportunity will involve collaborative work between UM and CFSAN, and are intended to focus on specific high priority information needs related to food safety and applied nutrition.

Dependent on the availability of funds, JIFSAN expects to fund up to four projects. Proposals submitted for consideration for the 2009 JIFSAN research funding program should meet the requirements listed below. Additional requirements associated with submission to either JIFSAN or CFS³ are listed in the instructions for submission.

1. The proposed projects should address one of the following research areas:

- Develop a risk assessment framework for folic acid intakes that takes into account inadequate, as well as excess intake of this nutrient. The framework should be able to consider various subpopulations (e.g., Hispanic, elderly).
 - Develop *in vitro*, *ex vivo*, or non-invasive, short-term *in vivo* assays that can be used to predict toxicity of dietary supplement ingredients or products. In developing proposed technique consideration should be given to how these assays can be validated against *bona fide* clinical or whole animal toxicological endpoints or recognized biomarkers of clinical outcomes.
 - Develop and validate analytical methods based on isotope ratio determination that can be used to distinguish between naturally occurring phthalates and “synthetic” (petroleum derived) phthalates in food and cosmetic matrices.
 - Develop and validate novel technologies such as biosensors can be used for the rapid detection, identification and molecular characterization of microbial foodborne pathogens.
2. In addition to a Principal Investigator (PI) from UM, one or more collaborators from CFSAN must be included. Additional collaborators from other institutions also may be included. Because these projects will be partnerships between UM faculty and CFSAN scientists, graduate research assistants and/or postdoctoral research associates may work in both UM and FDA facilities. Support funds may be used by the UM PI to purchase supplies used for work conducted in CFSAN laboratories. For assistance in identifying collaborators, please contact the JIFSAN office (301-405-8382) or the CFSAN Liaison and Partnership Team (Beth Calvey; 301-436-1981).

CFS³

The Center was recently established as a means for advancing joint academic, industry and government research, education, and outreach programs related to food safety and security systems. Its focus is the development of trans-disciplinary systems-approaches to solve priority regional, national and international concerns related to in food safety, food protection, and food security. The Center does this by drawing together scientists, educators, and interested parties from across UM, other universities, industry, and government to develop collaborative solutions.

Dependent on the availability of funds, CFS³ expects to fund up to two projects. Proposals submitted for consideration for the 2009 CFS³ research funding program should meet the requirements listed below. Additional requirements associated with submission to either JIFSAN or CFS³ are listed in the instructions for submission.

1. Proposed projects should address one of the following research areas which are among the priority research needs in food safety and security that are being addressed by CFS³:
 - Develop methods and modeling techniques that allow publically available supply chain and business data to be used to predict foods and food ingredients that are likely to be the target of economic adulteration in the future?
 - Develop and validate intervention technologies for the post-packaging treatment of dry foods and dry food ingredients to achieve at least a 4-D reduction in the levels of *Salmonella enterica* and other enteric pathogens.
 - Develop and provide a “proof of principle” for a technique for evaluating “in-field” produce crops for the fecal contamination prior to harvest. This should include the ability to locate contamination foci so that these locations within produce cultivation sites can be avoided or harvested separately.
 - Develop techniques for sampling foods and food ingredients that allow larger samples to be evaluated. Ideally, a successful application would be capable of evaluating at least 1 kg samples, be non-destructive, provide quantitative data, and would not require subsequent enrichment steps. Proposals focused on improved detection methods or improving sensitivities will not be considered.
2. Because of the multi-disciplinary nature of the research areas, Principal Investigators (PIs) from UM are encouraged to identify one or more collaborators from other departments, industry, or government agencies. For assistance in identifying collaborators with needed expertise, please contact R. Buchanan (301-405-1174), J. Meng (301-405-8382) or M. Parish (301-405-0773).

Submission of Proposal

1. **Required Documents.** Each PI should submit the following documents by July 24, 2009 the following documents.
 - (a) A project description (10-page limit) **in 12-point type** that includes the purpose or goal of the project, background information, the project plan, information on the expected contributions from the PI and each collaborator, a listing of other support for this work, and references.
 - (b) A completed JIFSAN/CFS3 Research Proposal Coversheet (available at www.jifsan.umd.edu or www.cfs3.umd.edu).
 - (c) A completed JIFSAN/CFS3 Research Proposal Budget Form for each year of the project (available at www.jifsan.umd.edu or www.cfs3.umd.edu).
 - (d) Biographical information (CV) for the PI and each collaborator (not to exceed three pages for each individual).

Each proposal may have only one PI. All other participants (e.g., UM, FDA/CFSAN, USDA, industry scientists) should be designated as collaborators. Proposals may request funding for up to two years. Successful proposals will be funded for one initial year with subsequent continuation depending on adequate progress (as demonstrated in an annual progress report), a continuation statement/proposal, and availability of funding. The Principal Investigator has the option of including up to 5% of his/her 9-month salary in the budget. Funds may not be used to support international travel or purchase of capital equipment.

Proposals, budget forms and biographical information should be submitted electronically to jifsan@umd.edu. The signed JIFSAN/CFS3 Research Proposal Coversheet can be faxed (301-405-8390), a scanned copy forwarded to jifsan@umd.edu, or mailed to JIFSAN, 1122 Patapsco Bldg.

Review of Proposals

The proposals will be reviewed by the Research Project Review Committee, using external reviewers if this is deemed advisable or necessary. The Committee will make funding recommendations to the directors of JIFSAN and CFS³. The final funding decision will be made based on:

- Scientific merit, including how well the proposal addresses one of research questions, and the adequacy and appropriateness of the project design and methods,
- Strength of the collaborative effort, including the qualifications and contributions of the PI and all collaborators and
- Funding and time line, including whether the proposed budget and time line are appropriate and adequate.
- Each proposal may have only one PI. All others participants (UM, CFSAN, etc.) will be collaborators.

Investigator notifications will be made no later than August 10, 2009, and funds for approved projects will be available on August 15, 2009. Investigators must start projects no later than September 1, 2009.