Institute for the Advancement of Food and Nutrition Sciences

740 Fifteenth Street, NW
Suite 600
Washington, DC 20005

www.iafns.org

IAFNS Carbohydrate Committee
Request for Pre-Proposals Due April 30

Metabolic and physiological effects of added fibers for children across the age spectrum.

The Institute for the Advancement of Food and Nutrition Sciences (IAFNS) is a public, non-profit scientific organization that advances the understanding and application of science related to the nutritional quality and safety of the food supply. The organization carries out its mission by sponsoring relevant research programs, professional education programs and workshops, seminars, and publications, as well as providing a neutral forum for government, academic, and industry scientists to address scientific issues of common concern for the well-being of the public. IAFNS programs are supported primarily by its industry membership.

The Committee addresses outstanding scientific issues through discovery, research tools, and translational messaging related to how carbohydrate rich foods, food components, and formulations are associated with consumption behavior, diet quality, and health outcomes.

IAFNS adheres to strict procedures to maintain scientific integrity in all work we support. These requirements are described further in the attached TOP Guidelines and 8 Guiding Principles for Scientific Integrity addendums.

Pre-proposals meeting the following criteria will be invited to submit a full proposal (which would include detailed research plans, a budget, and timeline).

1. Team comprised of demonstrated expertise and strong publication record in dietary fiber intake and health outcomes as well as expertise in systematic evidence review research.

2. Clear scope of work and research approach relevant to the specific questions.

3. Rough cost estimate and realistic timeframe.

Background

The U.S. Feeding Infants and Toddlers Study (FITS) reported low dietary fiber intake in majority of toddlers and preschoolers.[1] Fibers are added to foods targeting this population to improve fiber intake and promote gastrointestinal health. With more food products being made with additional fiber, their effects in children across the age span from 1 year through 18 years of age warrant examination. For example, in its 2015 position paper, the Academy of Nutrition and Dietetics (AND) called for trials to "confirm benefit intake level and specific type(s) of dietary fiber for the prevention of constipation" in children.[2] A first step is to map out the full scope of evidence from peer-reviewed published literature on levels of specific fiber intakes, including prebiotics, associated metabolic and physiological benefits in children across the age spectrum up to 18 years of age.

[1.] Butte NF, et al. Nutrient intakes of US infants, toddlers, and preschoolers meet or exceed dietary reference intakes. *J Am Diet Assoc* 2010;110(12 Suppl):S27-37.
[2.] Dahl WJ and Stewart ML. Position of the Academy of Nutrition and Dietetics: Health Implications of Dietary Fiber. *J Acad Nutr Diet* 2015;115(11):1861-70.

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Research Objective
Publish a qualitative scoping assessment on metabolic and physiological effects of added isolated or synthetic fibers among children from 1 to 18 years of age in order to identify evidence, research gaps, and priority research needs, as well as determine whether there is sufficient evidence to conduct a quality systematic review on a specific added fiber and health outcome.

Specific Aims
1. Summarize through knowledge mapping the scope of evidence from human studies linking added fiber intake in total and by types of fiber with specific health outcomes, by age sub-groups. All human health benefits should be considered, including but not limited to gastrointestinal function (e.g., laxation, reducing risk of constipation, beneficial microbiota, tolerance), metabolic factors, body weight, and immune function indicators and outcomes as well as reported adverse outcomes.

2. Fiber and health outcome experts will utilize evidence mapping results in order to
   a) identify research gaps and recommend priority research needs, and
   b) determine specific relationships for which evidence is sufficient to either support a systematic evidence review or to inform guidance on amount and type of added fibers (e.g., update existing specific guidance) for specific age groups.

Note: Based on results from the knowledge map, one or more requests for follow-up proposals may be issued to fund systematic evidence reviews evaluating the quality of evidence for specific added fibers and health outcomes that will inform dietary recommendations for fiber intake by specific age groups from infancy through teen years.

Fibers will include at minimum added extracted and synthesized fibers in the *Comprehensive Fiber Database* (link below) and the most up-to-date list of FDA approved fibers (such as beta-glucan soluble fiber, psyllium husk, cellulose, guar gum, pectin, locust bean gum, hydroxypropylmethylcellulose, mixed plant cell wall fibers, arabinoxylan, alginate, inulin and inulin-type fructans, high amylose starch, galactooligosaccharide, polydextrose, resistant maltodextrin/dextrin, cross linked phosphorylated RS4, glucomannan, most up to date list to be confirmed by the PI). PI should clearly specify the added fibers to be included, and may include experimental fibers not yet approved by the FDA for food labeling.

This *Comprehensive Fiber Database* is a resource available for use [https://iafns.org/our-work/research-tools-open-data/dietary-fiber-database/]

The scoping project should cover all health outcomes.

Additional considerations
- Out of scope: Foods naturally high fiber without added fibers (e.g., whole wheat, fruit, vegetables). Ingredient combinations in which fiber is tested in combination with another dietary component such that the independent effect of fiber is not ascertained (e.g., fiber+probiotic combination). The emphasis will be on research relevant to general public in North America (this excludes research on

malnourished and treatment or mitigation of medical conditions or populations that differ substantively from North Americans). Animal and in-vitro research.

- Successful proposals will be comprised of teams with researchers experienced in researching health benefits of fiber (this includes original published research on fiber in human studies in top tier nutrition journals) and experienced systematic evidence review experts.

Pre-Proposal Content

1. **Background:** Briefly describe background relevant to the project and proposed approach to address the research objectives.

2. **Research Approach:**
   - Overall methodology
   - Questions to be answered
   - Primary and secondary outcomes clearly identified
   - Research approach in broad terms, including the source of data, methods to be used, brief overview of dietary intake data (population, timeliness of data), and specific contemporary diets to be assessed (including but not limited to a minimum sample size for each diet for reported intakes).

3. **Research Team:** Principal investigator(s), co-investigators, key team members, and collaborators that may be affiliated but not part of the grant, indicating all potential conflicts of interest.

4. **Investigator Credentials:** Describe the experiences that make you and your team a candidate for carrying out this project. In addition, the CV of the principal investigator(s) is required. Demonstrated success publishing in this topic area in a quality peer-reviewed journal is a minimum criteria.

5. **Estimated budget range and timelines:** Please provide the range of budget, noting that if overhead is necessary, IAFNS limits overhead to 10% of total project costs. Include journal fees to cover free access (typically US$3,000) in the budget. Timelines should include both a presentation of results to committee in-person or by webinar and submit date for a final manuscript in a top tier peer-reviewed journal for publication.

6. **References cited:**

Pre-proposals are to be submitted to the attention of Barbara Lyle (blyle@ilsi.org) by midnight eastern time April 30, 2021. Pre-proposals should be submitted using the template shown below in the addendums, which is provided in a separate document for your use.

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Addendum for RFPs
IAFNS's Guiding Principles for Funding Food Science and Nutrition Research

Background:
The scientific process requires open, transparent examination and honest interpretation of data, regardless of a researcher's affiliation or source of funding. The following Guiding Principles[1] address the potential influence of funding source on scientific research. All projects supported by IAFNS must adhere to these principles.

Guiding Principles for Funding Food Science and Nutrition Research:
In the conduct of public/private research relations, all relevant parties shall:
1. Conduct or sponsor research that is factual, transparent, and designed objectively; according to accepted principles of scientific inquiry, the research design will investigate an appropriately phrased hypothesis and/or question, rather than favor a particular outcome;
2. Require control of the study design, the research itself, and the interpretation of findings to remain with scientific investigators;
3. Not offer or accept remuneration geared to the outcome of a research project;
4. Prior to the commencement of studies, ensure that there is a written agreement that the investigative team has an obligation to attempt to publish the findings within some specified timeframe and the freedom to choose the journal to which the work will be submitted;
5. Require, in publications and conference presentations, full written or oral disclosure, as appropriate of all relevant relationships (financial and non-financial competing interests);
6. Not participate in undisclosed authorship arrangements in publications or presentations;
7. Guarantee accessibility to all data and control of statistical analysis by investigators and appropriate auditors/peer reviewers; when possible, encourage the practice of open science, including depositing data and methodology on a public repository;
8. Require that academic researchers, when they work in contract research organizations or act as contract researchers, make clear statements of their affiliation; require that such researchers publish under the auspices of the contract research organization;
9. Require, in publications and conference presentations, disclosure of whether the funder advised on the study design, conduct of research and/or the development of the manuscript.

Adoption of the Center of Open Science's Transparency and Openness Promotion Guidelines by IAFNS

Background: The Center for Open Science's Transparency and Openness Promotion (TOP) Guidelines provide actionable steps for institutions to practice and promote transparent, reproducible, and rigorous research. IAFNS is a TOP Guidelines signatory. By becoming a signatory, IAFNS is supporting the principles expressed in the guidelines through their implementation by its funded researchers. The TOP Guidelines include eight modular standards for promoting transparent, reproducible and rigorous research, each with three levels of increasing stringency.
TOP Guidelines:
1. Data Citation Standards (Level 3): Cite shared data. Don't publish until it is appropriately cited.

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2. Data Transparency (Level 2): Data must be shared to the maximal extent allowed by ethical and legal constraints.
3. Analytic Methods (Code) Transparency (Level 2): Analytic methods (code) must be shared to the maximal extent allowed by ethical and legal constraints.
4. Research Materials Transparency Level 2): Materials must be shared to the maximal extent allowed by ethical and legal constraints.
5. Design and Analysis Transparency (Level 2): The researcher must use reporting guidelines when writing up publications. Equator-network website provides a huge choice of standards for research designs. http://www.equator-network.org/ The researcher is asked to select one and register the standard you have selected.
6. Study Preregistration (Level 2): When the researcher preregisters his/her study in an independent, institutional registry (e.g., http://osf.io/, https://www.crd.york.ac.uk/prospero/, http://clinicaltrials.gov/), which is encouraged but not required, IAFNS will request a third party (e.g., Center for Open Science) verify that preregistration adheres to the specifications for preregistration before data collection.
7. Analysis Plan Preregistration (Level 2): When the researcher preregisters his/her study analysis plan in an independent, institutional registry (e.g., http://osf.io/, https://www.crd.york.ac.uk/prospero/, http://clinicaltrials.gov/), which is encouraged but not required, IAFNS will request a third party (e.g., Center for Open Science) verify for adherence to preregistered plan (deviations must be transparently reported) before data collection.
8. Replication (Level 1): IAFNS will occasionally put out a call for replication studies as part of our RFP process.

Template IAFNS Pre-Proposal on

Metabolic and physiological effects of fiber sources for children across the age spectrum.

(2-page maximum, single space, 11 font minimum)

Date:_____

Lead Investigator, affiliated organization for the grant, email, phone	
Overview of approach (1-3 sentences)	

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Background (1-3 sentences)

Primary hypothesis

- X

Secondary hypotheses

- X
- Y

Research approach

Investigator credentials of PI, co-PI, co-investigators, and collaborators

Name	**Affiliation** (Institution and department)	**Disclose potential conflicts of interest and all funding sources over $5,000 (2016+)**

Attach PI/co-PI CV or NIH biosketch

Estimated budget and timeline

Range with a clear estimated upper limit to costs inclusive of all direct and if necessary indirect costs (the latter of which are limited to 10%) as well as free access publication fees (typically around $3,000) =

Estimated maximum time from agreement to submitted manuscript for publication =