THE OHIO STATE UNIVERSITY

FFH + TDAI

PILOT Grant

2022 - 2023
Request for proposals

INTRODUCTION

Artificial intelligence (AI) and machine learning (ML) methodologies have the potential to provide new insights on the complex relationship between diet and overall health. From integration of large 'omics' datasets to the use of computer vision to capture dietary intake, there are countless ways that AI/ML can be used to advance food, nutrition, and health research.

The Foods for Health Research Initiative (FFH) and Translational Data Analytics Institute (TDAI) are excited to join forces and release **a new pilot grant opportunity** focused on the intersection of AI/ML, food, nutrition, and health.

FFH-TDAI Pilot Awards will provide funds for a project that integrates AI/ML and the food-nutrition-health continuum.

Topics of high interest for both awards include, but are not limited to:

- Advanced analysis and integration of multiple 'omic'-type datasets
- Advanced analysis and integration of 'omic' datasets across sample types (e.g. connecting food and biological samples for food intake biomarkers)
- Analysis of diet-host-microbiome relationships
- Development of tools to capture dietary intake data
- New or improved methods of dietary pattern analysis
- Development of predictive tools for precise dietary recommendations
- Integration of data related to human behavior, dietary choice, and health outcomes.
- Wearable or sensor technology to facilitate new insights on health outcomes from food/nutritional interventions

Please direct questions to Matt Teegarden (teegarden.3@osu.edu) and Jenny Grabmier (grabmeier.3@osu.edu).

PILOT Award RFA

The inaugural PILOT award will provide up to $50,000 in direct costs for a two-year project. The purpose of this funding mechanism is to encourage integration of research across artificial intelligence, data science, and the food-nutrition-health continuum.

Eligibility
- This opportunity is open to all FFH and TDAI core and affiliate faculty
- Two faculty members will serve as Co-PIs, one must be data science/AI-focused and the other focused on food-nutrition-health. Multi-departmental and multi-college collaborations are strongly encouraged.
- Additional co-investigators may also be listed
- The same individual may not serve as a co-PI on more than one PILOT award application.

Projects
- Investigators may propose projects that utilize established datasets.
- Refer to the introduction section of this document for high priority research areas.

Award Terms
- All awards will be transferred to and administered by the home department of one Co-PI. The administrating department must be indicated on the budget template. Funds will be valid for two years form the date of initial fund transfer.
- No faculty salaries, faculty fringe benefits, or capital equipment (>$5,000 purchase price) will be supported.
- Travel necessary for completion of research is allowed. Travel expenses for presentation of results is allowable up to $2,000. Planned travel should be conducted in accordance with the University policy in place at the time of travel.
- 50% of funds will be transferred at the start of the award period, with the second 50% released upon submission of an acceptable mid-term report. Alternative disbursement schemes will be considered if strongly justified.
- No-cost extensions are discouraged, though permissible only in extenuating circumstances.
- A final report must be submitted by the end of the two-year award period. Failure to submit a final report will result in disqualification from future funding opportunities under this RFA.

   Note: Be sure to review the Expected Outcomes section below.

- FFH and TDAI must be acknowledged in all resulting publications and presentations
- The FFH worktag (cc10677) and TDAI worktag (cc13305) must be included at 0% effort level in the associated PA005 for any future proposal submissions that use outcomes that result from this award. This will allow both FFH and TDAI to track effort and return on investment to ensure the longevity of this program.

Expected Outcomes

Recipients of this award are expected to submit joint publication(s) to peer-reviewed journal(s) and/or joint application(s) for extramural funding related to the project within one year of project completion.

Letter of Intent (Required)

All interested teams must submit a letter outlining the following within 2 pages:

- Names and affiliations of both co-PIs, including short descriptions of past work and expertise. Please also mention any previous collaborations between the co-PIs.
- General description of research area, the key questions that the team will address, and the techniques that will be used in the proposed research.
- The significance of this research in terms of future fundability and impact
- Three recommended reviewers from Ohio State that meet the following conflict of interest guidelines:
    a. Co-authors of any publications, pending publications, or submissions within the past 3 years
    b. Project collaborations, including current and planned collaborations, within the past 3 years
    c. Has been an advisee or advisor for thesis, dissertation, or post-doctoral work
- Would have any other reasonable conflict of interest (consulting, financial arrangement, etc.) within the last 3 years

Submit letters of intent to the following link by January 17, 2023 at 11:59 PM:
https://forms.office.com/r/ySX6smWrFw

Application Format

Note that applications are limited to three pages including figures and tables. Section III is not counted towards the page limit. Applications must be saved as a single PDF using the naming convention "co-PI Name co-PI Name_PILOT23.pdf" (e.g., Smith Brown_PILOT23.pdf). Documents should be single-spaed with ½ in margins and 11-point type (Calibri or Times New Roman). Sections will include:

I. Introduction

   a. Title of proposal

   b. Co-PIs including names, colleges, and departments

   c. Lay abstract (250 words max)

   d. Background rationale

   e. Hypotheses and objectives

   f. Innovation statement: Describe your project's scientific, scholarly and/or artistic significance; the potential applications/impact of its outcomes and their potential to result in or lead to transformational, rather than incremental, change; and why an interdisciplinary approach is needed. Discuss any ethical considerations for the research.

Application Format (continued)

II. Approach and Outcomes

    a. Materials & Methods: describe the study design and methodology that will be used to collect and/or analyze data. If utilizing an existing dataset, provide background information on the dataset and methods of accessing the dataset.

    b. Expected Results: describe anticipated findings using applicable references and preliminary data (if applicable). Discuss the technical value these findings would have. Describe potential pitfalls and how these will be overcome or accounted for.

    c. Outcomes: describe how the proposed work will be used to advance competitive extramural funding applications. In addition, discuss additional ways in which results will be used (e.g. publications, teaching, etc). Be as specific as possible in terms of use cases and timelines.

III. Supporting Materials (not included in 3-page limit)

    a. Works cited/references

    b. Timeline: briefly describe how work will progress over the 24-month period.

    c. Budget: use the approved template, no other template will be accepted ([linked here](#))

    d. Budget Narrative: justify costs, including how cost/sample is calculated (if applicable).

    e. Team: provide the name, contact information, title, affiliations, and proposed project contribution for each team member. In lieu of a full biosketch, briefly describe the relevant expertise and experience of each member.

    f. Past outcomes: for each Co-PI provide a short synopsis of outcomes achieved through previous seed grants awarded at Ohio State.

Timeline

- November 1: RFA released
- January 17: LOI due
- Feb 1: applications due
- March 31: anticipated notice of awards
- June 1: Project start

Submission

Applications must be saved as a single PDF using the naming convention "co-PI Name co-PI Name_PILOT23.pdf" (e.g., Smith Brown_PILOT23.pdf).

Completed applications can be submitted at the following link

by February 1, 2023 at 11:59 PM:

[go.osu.edu/ffhtdaipilotgrantsubmissions](#)