



National Institutes of Health
Office of Nutrition Research

Introducing the New NIH Office of Nutrition Research (ONR)

NATIONAL ADVISORY COUNCIL FOR NURSING RESEARCH- 105th Meeting

Christopher J. Lynch, Ph.D.
Acting Director, NIH Office of Nutrition Research
September 14, 2021

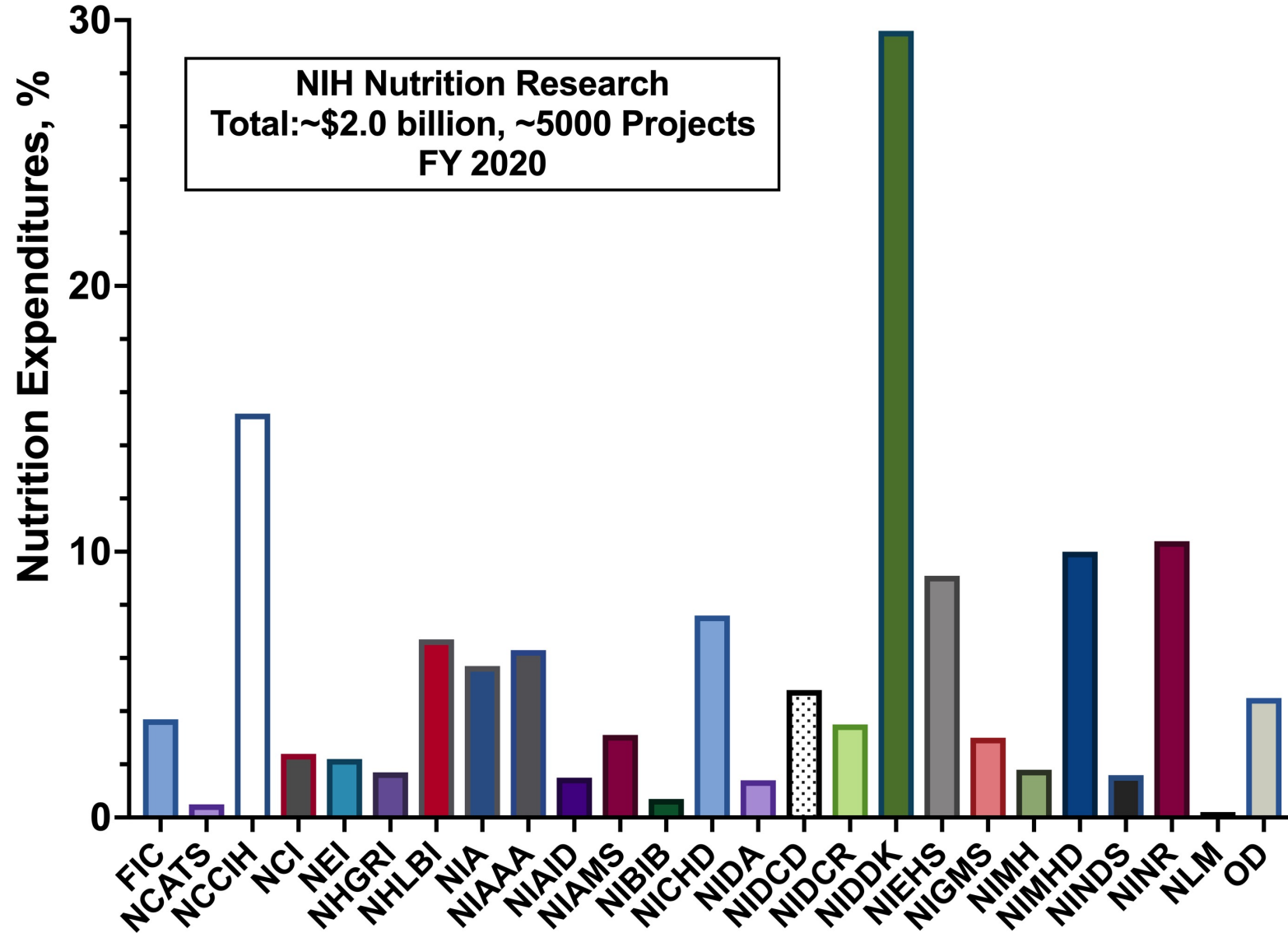




OUTLINE

- NIH Nutrition Research and the Office of Nutrition Research
- Implementation of the 2020-2030 Strategic Plan for NIH Nutrition Research
- Nutrition for Precision Health, powered by the All of Us research program

Nutrition is a cross-cutting topic across many ICs



I'm pleased to share that this week, NIH has begun the official transfer of ONR to DPCPSI. This reorganization positions ONR to enhance engagement of the NIH Institutes and Centers in implementing the [2020-2030 Strategic Plan for NIH Nutrition Research](#) to develop new collaborations and relationships focused on nutrition research within and outside NIH, and to ensure coordination of and leadership for nutrition research across the agency.

Francis S. Collins, M.D., Ph.D.
Director, National Institutes of Health

Statement on the establishment of the Office of Nutrition Research within the NIH Office of the Director

January 8, 2021



ONR Mission

Advance nutrition science to promote health and
reduce the burden of diet-related diseases

ONR Key Responsibilities

- Advises the NIH leadership on matters relating to nutrition research
- Coordinates implementation of the Strategic Plan for NIH Nutrition Research
 - Identifies research topics that deserve expanded effort and support by the ICs
 - Develops, leads, and manages trans-NIH nutrition research projects in cooperation with the ICs
- Leads and represents NIH on interagency committees on nutrition research and related policy issues.

What's Inside

The 2020-30 Strategic Plan for NIH Nutrition Research?

Unifying Vision: Precision Nutrition

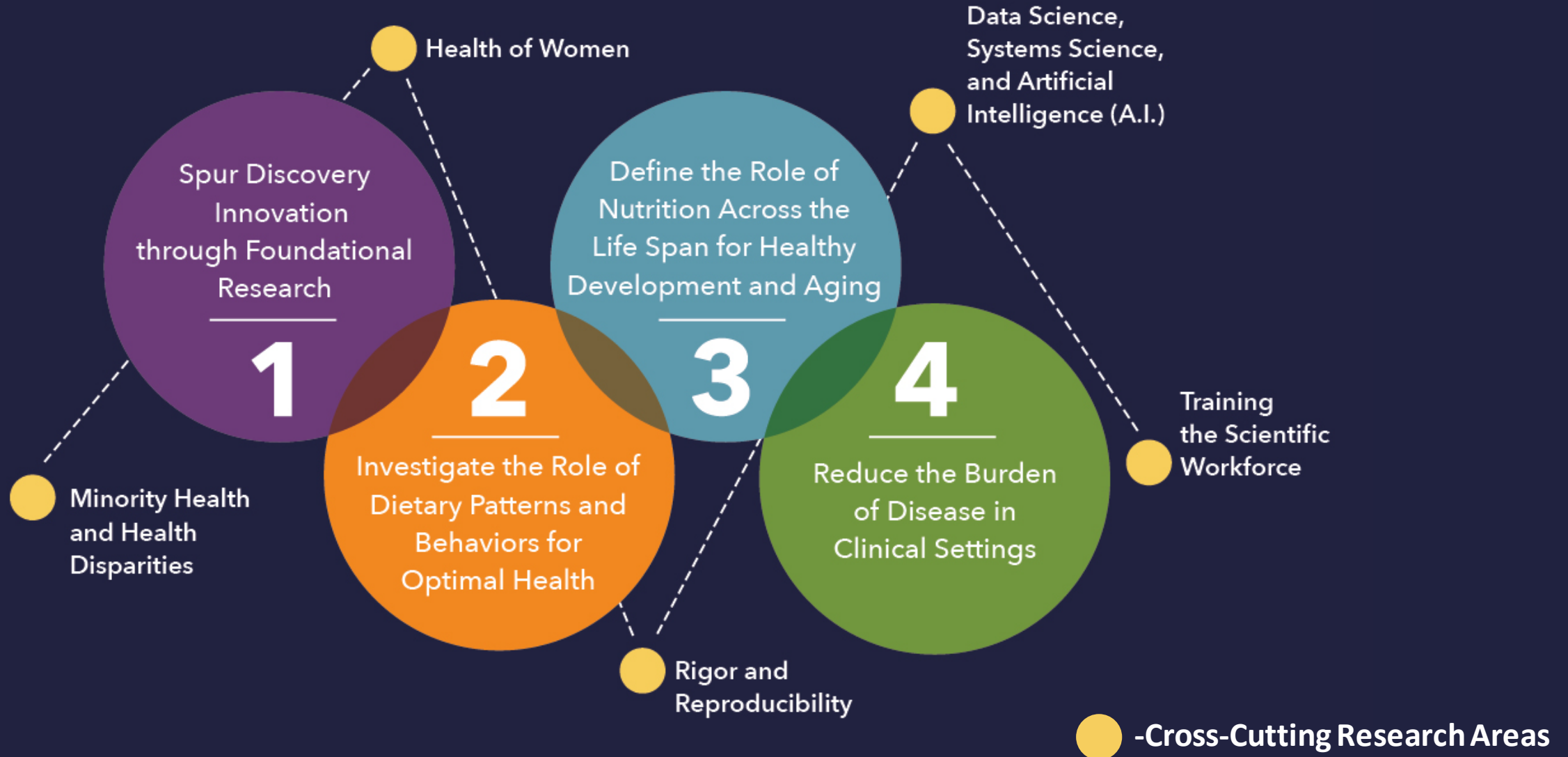


2020-2030 Strategic Plan for NIH Nutrition Research

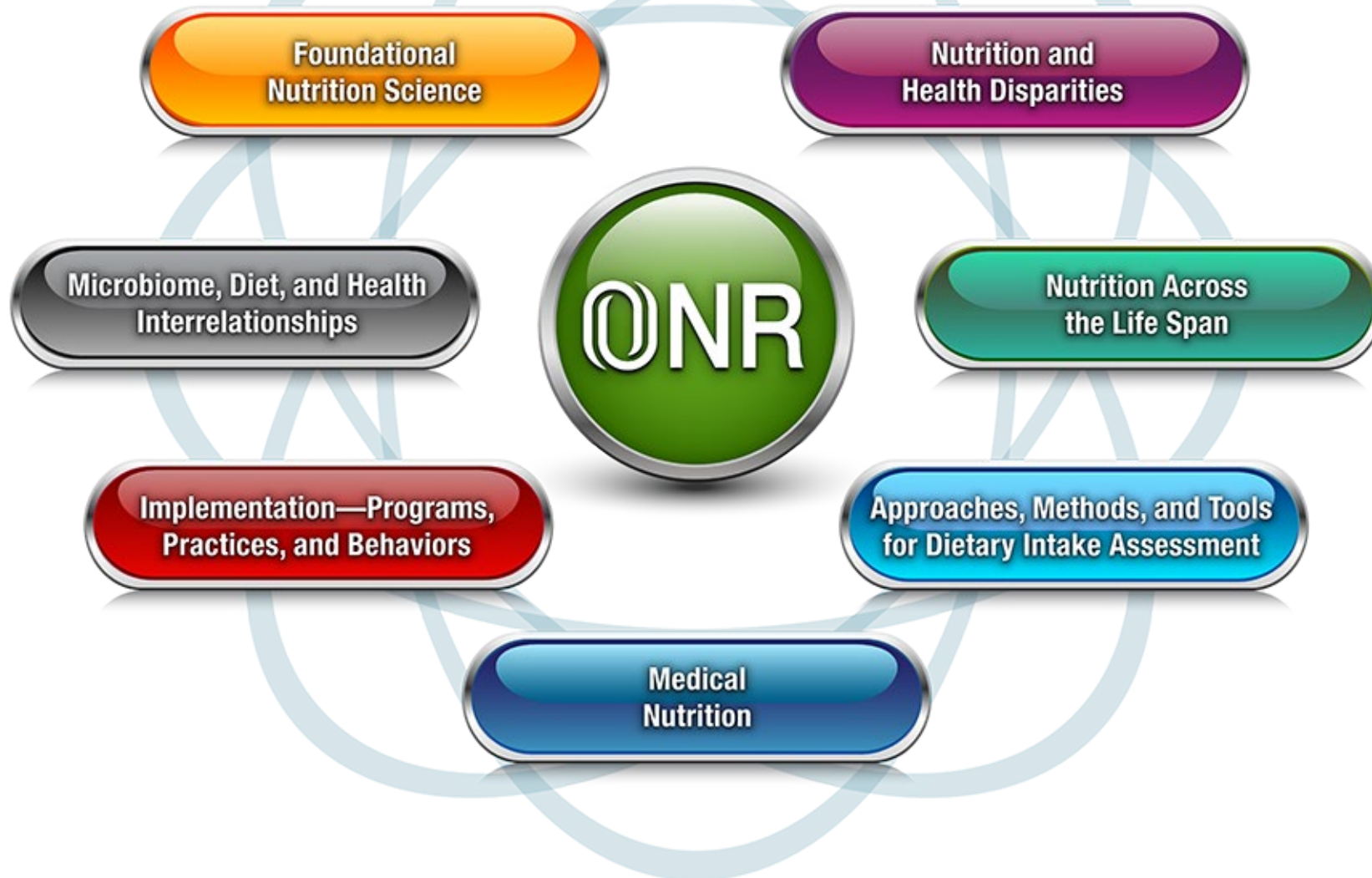
A Report of the NIH Nutrition Research Task Force



Precision Nutrition *is the unifying vision with multiple Strategic Goals and Cross-cutting Research Areas*



Strategic Plan for NIH Nutrition Research Implementation Working Groups



The implementation strategy includes trans-NIH activities and initiatives inspired by strategic goals and cross-cutting research areas in the Plan.

“Keeping our Eye on the Ball”

Cell

Leading Edge

Commentary

Biomedical Research Goes Viral: Dangers and Opportunities

Eleftheria Zeggini, Michael Baumann,
Magdalena Gotz, Stephaan Herzig,
Martin Hrabe de Angelis,⁸
and Matthias H. Tschop^{1,2,8,*}

doi.org/10.1016/j.cell.2020.05.014



Researchers around the globe have been mounting, accelerating, and redeploying efforts across disciplines and organizations to tackle the SARS-CoV-2 outbreak. However, humankind continues to be afflicted by numerous other devastating diseases in increasing numbers.

An example Implementation Working Group

Nutrition and Health Disparities IWG

Co-Chairs:

Alison Brown, NHLBI



Tanya Agurs-Collins, NCI



<https://dpcpsi.nih.gov/onr/iwg/nutrition-health-disparities>

Members:

Samantha Adas, ONR

Ligia Artiles, NIMHD

Josephine Boyington, NHLBI

Paul Cotton, NHLBI

Heather D'Angelo, NCI

Mary Evans, NIDDK

Kirsten Herrick, NCI

Hiroko Iida, NIDCR

Bill Jirles, NIEHS

Lyndon Joseph, NIA

Brama Kowtha, OD

Wayne Lawrence, NCI

Priscah Mujuru, NIMHD

Linda Nebeling, NCI

Holly Nicastro, ONR

Charlotte Pratt, NHLBI

Amanda Price, NINR

Nishadi Rajapakse, NIMHD

Jill Reedy, NCI

Marissa Shams-White, NCI

Yang (Scarlet) Shi, NHLBI

Natalie Tomitch, OD

Anil Wali, NCI

Dan Xi, NCI

Giovanna Zappalà, NIA

This IWG seeks to advance NIH research to understand the interactions between diet, nutritional status, the environment, and biological and behavioral processes, and how they contribute to health disparities.

Food Insecurity, Neighborhood Food Environment, and Nutrition Health Disparities: State of the Science



Virtual Workshop
September 21 – 23, 2021
12:30 – 5:30 p.m. EDT



- OVERVIEW**
- AGENDA
- SPEAKERS
- ABSTRACTS & POSTERS
- SPONSORS & PARTNERS
- HELP

September 21-23, 2021 12:30-5:30 p.m. EDT-Doors open at 12:00 p.m. EDT

Share

Food Insecurity, Neighborhood Food Environment, and Nutrition Health Disparities: State of the Science

EARLY ACCESS

FREE VIRTUAL WORKSHOP
Sept 21-23, 2021, 12:30-5:30 PM EST



Information will be updated regularly. Be sure to check back.

Background

Nutrition plays an important role throughout our lives in promoting health and preventing disease. But

EVENT COUNTDOWN

36	0	6	29
Days	Hours	Minutes	Seconds

PROFILE



Christopher Lynch
Acting Director
[Edit Labroots Profile](#) | [Logout](#)

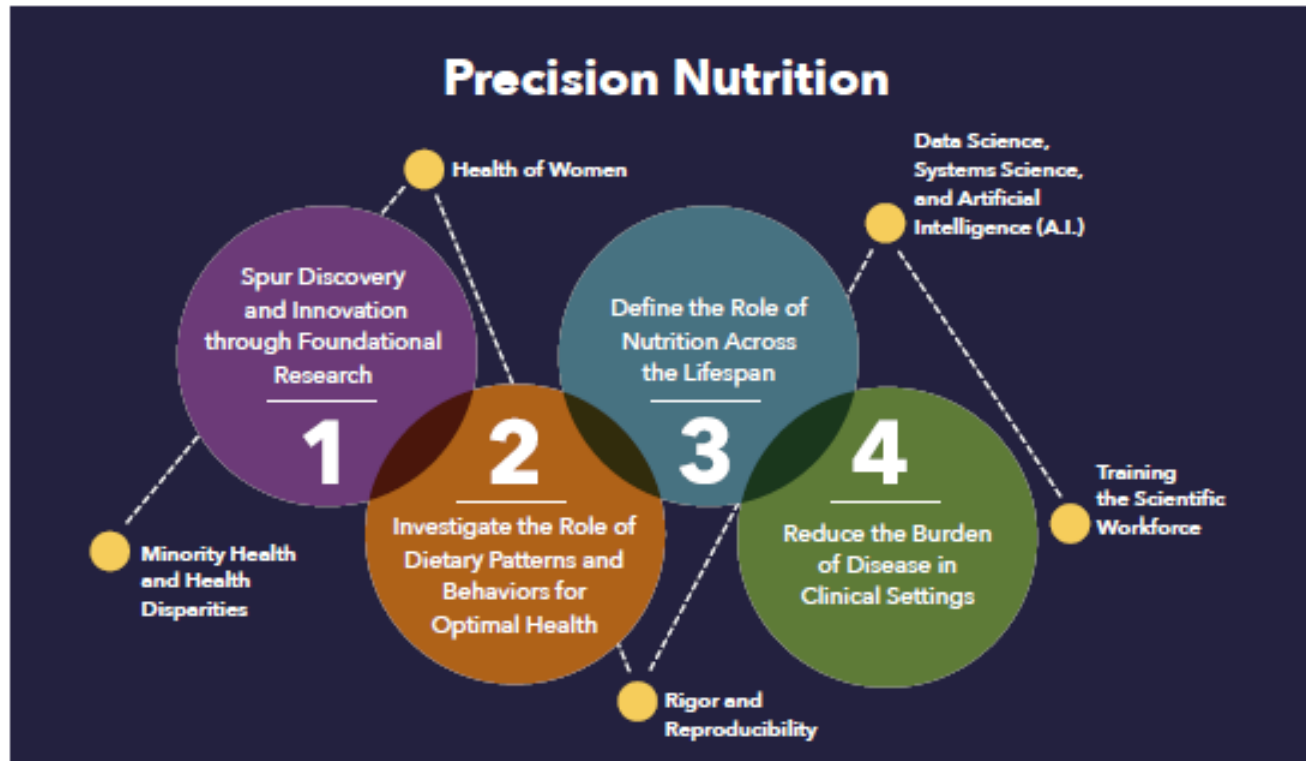
ATTENDEES

			See more

2020–2030 Strategic Plan for NIH Nutrition Research

A Report of the NIH Nutrition Research Task Force

Precision Nutrition is a Unifying Vision



Objective 2-5. Develop and Validate Algorithms to Predict What All of Us Should Eat

Nutrition for Precision Health

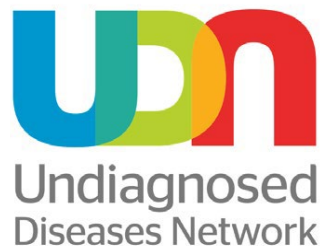
Powered by the *All of Us* Research Program



- NPH Primary Goal: to develop algorithms to predict individual responses to foods and dietary patterns
 - Using comprehensive set of microbiome, genomic, physiological, metabolic, behavioral, cognitive, contextual, electronic health record, survey, and environmental data
 - In large and diverse population of participants
- NPH Secondary Goals:
 - Improving dietary assessment methods
 - Nutrition Science Discovery Engine
- Learn more: <https://commonfund.nih.gov/nutritionforprecisionhealth>

NPH is a Common Fund Program

- Transformative** Must have the potential to dramatically benefit biomedical and/or behavioral research
- Catalytic** Must achieve a defined set of goals within 5-10 years
- Synergistic** Outcomes must synergistically advance individual missions of Institutes and Centers
- Cross-cutting** Program areas must cut across missions of multiple Institutes and Centers, requiring a coordinated approach
- Unique** No other entity is likely or able to do



NPH is nested in the All of Us Research Program

- ◉ **Diversity at the scale of 1 million people or more**
- ◉ **Focus on participants as partners**
- ◉ **Longitudinal design, ability to recontact**
- ◉ **Multiple data types:** EHR, surveys, baseline physical measurements, biospecimens, genomics
- ◉ **National, open resource for all:** broadly accessible to all researchers with open source software & tools
- ◉ **Security and privacy safeguards** for all participant data



Study overview – modular design

1



Examine baseline diet and physiological responses to meal challenges

10,000 *All of Us* participants

2



Examine responses to 3 short-term intervention diets in free-living controlled feeding studies

1,000- 1500 Module 1 participants



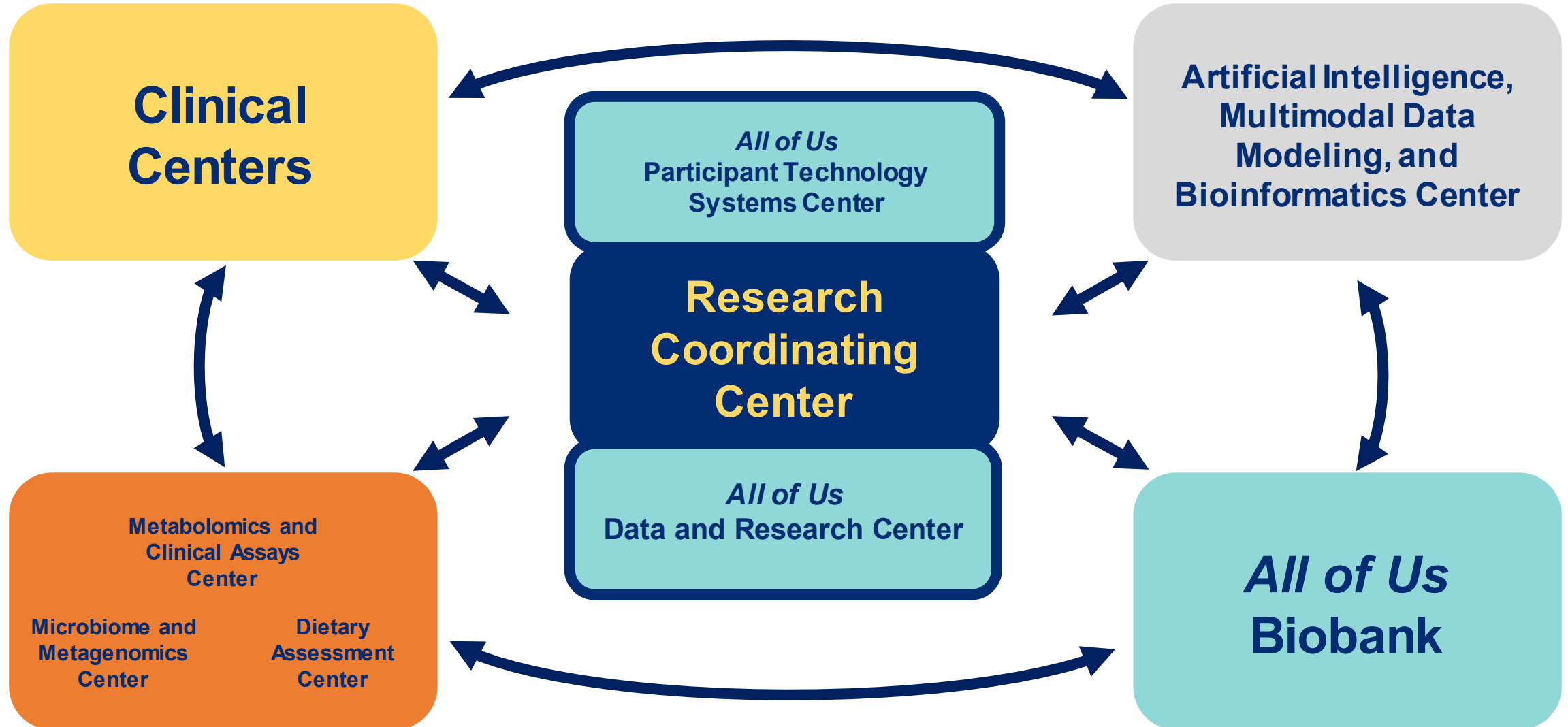
Examine responses to 3 short-term intervention diets in domiciled controlled feeding studies

500-1000 Module 1 participants

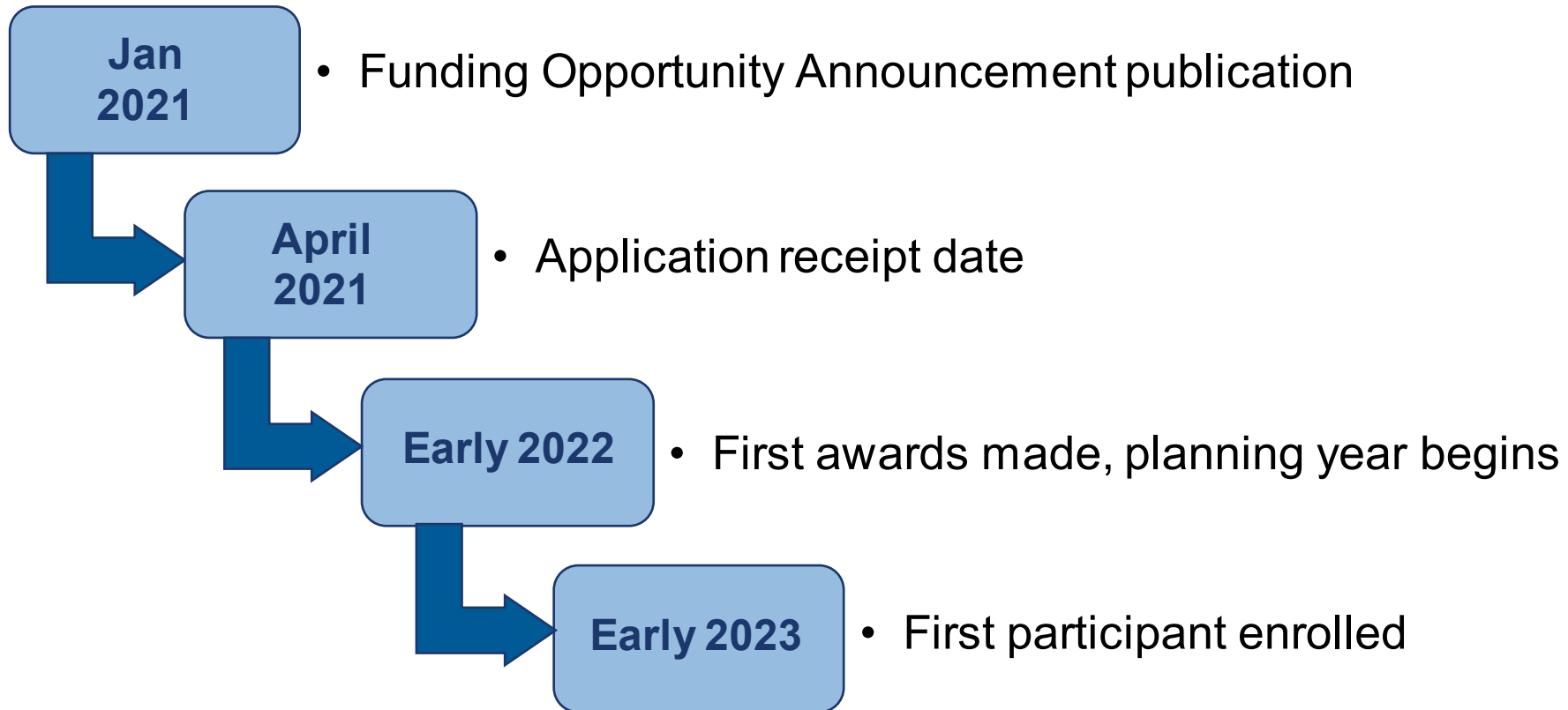
In all 3 modules

- Collect microbiome, physiological, metabolic, behavioral, cognitive, and environmental data, and leverage existing genomic, EHR, and survey data, and conduct mixed meal challenges to model the impact of diet and dietary patterns on physiological responses
- Use machine learning and artificial intelligence to develop predictive algorithms

NPH Program structure



Timeline



Learn more: <https://commonfund.nih.gov/nutritionforprecisionhealth>

We're Listening



NutRitioNaLS

NIH Research on Nutrition
Listening Sessions



- We recognize that opportunities for the nutrition research community to engage ad hoc with NIH staff in person will continue to will be limited in the next year
- Through our **NutRitioNaLS** program, we're facilitating discussions between relevant NIH staff and nutrition research stakeholders (trainees, scientists or groups)
- Listening Session Requests – nutritionresearch@nih.gov



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Thank you!
Questions?

