



**Exponent**<sup>®</sup>  
Engineering & Scientific Consulting

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## Professional Profile

Audrey Goldbaum is a nutrition scientist whose multidisciplinary expertise spans the full research lifecycle- from laboratory-based mechanistic studies to large-scale population-level dietary surveillance. This background has equipped her with a diverse toolbox of analytical and methodological skills spanning advanced statistical modeling, machine learning, and mixed-methods research design, complemented by early experience in toxicology.

Prior to Exponent, Dr. Goldbaum was a Cancer Prevention Postdoctoral Fellow at the National Cancer Institute (NCI). In this role, she led a diverse number of scientific projects in addition to co-chairing and supporting symposiums and workshops. Notably, she served as a lead analyst in support of the Scientific Report of the 2025 Dietary Guidelines Advisory Committee, where she applied complex survey methods, developed R-based data visualization tools, and coordinated analyses across federal partners including the Department of Health and Human Services (HHS) and the United States Department of Agriculture (USDA). Her work also includes tree-based machine learning approaches to model diet–disease relationships, mixed-methods research, and human subjects research oversight.

Dr. Goldbaum brings experience analyzing a wide range of data types, from 16S rRNA gene sequencing to nationally representative dietary intake data, including data from the National Health and Nutrition Examination Survey (NHANES). From her time at the NCI, she gained expertise in the NCI method for estimating usual intake distributions.

## Academic Credentials & Professional Honors

M.P.H., Quantitative Methods, Harvard T.H. Chan School of Public Health, 2023

Ph.D., Nutrition Science, Purdue University, 2022

B.S., Molecular Toxicology, University of California, Berkeley, 2014

## Prior Experience

Cancer Prevention Fellow, National Institutes of Health (NIH), National Cancer Institute (NCI), Cancer Prevention Fellowship Program, 2022-2026

Research Technician, Jean Mayer Human Nutrition Research Center on Aging, Tufts University, 2014-2016

## Professional Affiliations

International Society for Diet and Activity Methods, 2024-present

Society of Behavior Medicine, 2024-present

American Society for Nutrition, 2023-present

## Publications

Tjaden AH, Goldbaum AA, Edelstein SL, Heckman-Stoddard BM, Reedy J, Herman WH, Knowler WC, Schlögl M, Temple KA, Venditti EM, Watson K, Temprosa M, Shams-White MM, the DPP Research Group. [The 2018 World Cancer Research Fund / American Institute for Cancer Research Score and Cancer Risk: results from the diabetes prevention program outcomes study. American Journal of Clinical Nutrition 2025;122\(3\):715–723.](#)

[Goldbaum AA, Bowers LB, Cox AD, Gillig M, Organski AC, Cross TL. The role of diet and the gut microbiota in the obesity-colorectal cancer link. Nutrition and Cancer 2025; 77\(6\):626–639.](#)

Shams-White MM, Goldbaum AA, Agurs-Collins T, Czajkowski S., Herrick KA, Nebeling L, Reedy J, Riscuta G, Ross S, Sauter ER. Time-restricted eating and cancer: lessons learned and considerations for a path forward. JNCI: Journal of the National Cancer Institute 2024; djae331.

Bowers LB, Glenny EM, Punjala A, Lanman NA, Goldbaum A, Himbert C, Montgomery SA, Yang P, Roper J, Ulrich CM, Dannenberg AJ, Coleman MF, Hursting SD. [Weight loss and/or sulindac mitigate obesity-associated transcriptome, microbiome, and protumor effects in a murine model of colon cancer.](#) Cancer Prev Res 2022; 15(8):481–495.

Walker ME, Matthan NR, Goldbaum A, Meng H, Lamon-Fava S, Lakshman S, Jang S, Molokin A, Solano-Aguilar G, Urban JF Jr, Lichtenstein AH. [Dietary patterns influence epicardial adipose tissue fatty acid composition and inflammatory gene expression in the Ossabaw pig.](#) J Nutr Biochem 2019; 70:138-146.

Matthan NR, Solano-Aguilar G, Meng H, Lamon-Fava S, Goldbaum A, Walker ME, Jang S, Lakshman S, Molokin A, Xie Y, Beshah E, Stanley J, Urban JF Jr, Lichtenstein AH. [The Ossabaw pig is a suitable translational model to evaluate dietary patterns and coronary artery disease risk.](#) J Nutr. 2018; 148(4):542–551.

Daniels SI, Sillé FC, Goldbaum A, Yee B, Key EF, Zhang L, Smith MT, Thomas R. [Improving power to detect changes in blood miRNA expression by accounting for sources of variability in experimental designs.](#) Cancer Epidemiol Biomarkers Prev. 2014; (12):2658–66.

## Presentations

Goldbaum A. From Pipettes to policy: leveraging cross-disciplinary experience in nutrition and cancer research. Laura Bowers Lecture, 2026.

Goldbaum A. Context, context, context, adapting health behavior guidelines for cancer risk reduction in diverse populations. Annual Meeting & Scientific Sessions of the Society for Behavioral Medicine Symposium, 2026.

Goldbaum A. Assessing the American diet through the lens of two economic measures. Division of Cancer Control and Population Sciences Fellows Symposium, 2025.

Goldbaum A. NIH Data Analysis Team: leveraging an IMS contract to support the Dietary Guidelines for Americans (DGAs). Epidemiology and Genomics Research Program Lightning Talks, 2025.

Goldbaum A. 2025-2030 dietary guidelines for Americans: from pipettes to policy. Cancer Prevention Fellowship Program Fellows Research Meeting, 2024.

Goldbaum A. Tree-based machine learning: exploring strategies to model dietary patterns and their relationship to disease. Epidemiology and Genomics Research Program Works in Progress (WIP) meeting, 2024.

Goldbaum A. Tree-based machine learning: Exploring strategies to model risk factor-cancer relationships. Division of Cancer Control and Population Sciences Fellows Symposium, 2024.

Goldbaum A. Decision trees: a strategic way to model the risk factor-cancer relationship. Cancer Prevention Fellowship Program Fellows Research Meeting, 2024.

Goldbaum A. Determining the role of the gut microbiota in the obesity-colorectal cancer link. Purdue Interdepartmental Nutrition Program and Fuqua Graduate Student Seminar Series, 2021.

## Project Experience

Led the NIH data analysis team in application of the NCI method to evaluate usual dietary intake in support of the Scientific Report of the 2025 Dietary Guidelines Advisory Committee. Authored technical summaries, reports, and data management documentation.

Directed an international collaboration to develop a culturally adaptable cancer prevention screener based on WCRF/AICR recommendations, employing a mixed-methods research design including qualitative interviews and usability testing, and securing competitive grant funding to support the evaluation.

Authored a successful research proposal examining the application of tree-based machine learning algorithms to model complex diet-disease relationships using the large-scale NIH-AARP Diet and Health Study cohort.

Co-chaired the Cancer Prevention Fellowship Program (CPFP) Fellows Advisory Board, serving as the primary liaison between program leadership and 30+ fellows and administering needs assessment surveys to support fellows at various career stages.

Co-led the CPFP Fellows Fall Scientific Symposium, coordinating seven speakers and achieving a 94% attendance conversion rate among 62 attendees from internal and external research communities.

Served as moderator for an international workshop on the NCI Method for Measurement Error Adjustment, managing participant engagement and question curation across in-person and remote attendees.