Dear Members of the Nutrition Department:

As 2021 draws to a close, I would like to express my deepest gratitude to all of you for your steadfast support and commitment to our department. Amid the evolving challenges of the COVID-19 pandemic, you have continued to demonstrate remarkable resilience and resourcefulness, and our department has continued to advance our educational and research missions. This fall we welcomed 16 MPH-65 in Nutrition students to our department, the third and largest cohort so far.

The past year has seen an expansion of our department faculty. Dr Heather Eliassen joined our department as a tenured faculty member in the role of Professor of Nutrition and Epidemiology on July 1, 2021. Heather is a nationally recognized cancer epidemiologist with a research focus on hormonal factors, dietary biomarkers, and metabolomics and breast cancer risk. She is the co-PI of the Nurses’ Health Study and Nurses’ Health Study II. In addition, Dr Jorge Chavarro has been promoted to tenured Professor in our department. Jorge’s research aims to understand how nutritional and lifestyle factors affect human fertility and other reproductive events throughout the life course and how these events, in turn, impact other aspects of health. Jorge is the PI of the Nurses’ Health Study 3.

Several new faculty members have joined our department this year, including Dr Shilpa Bhatia, Assistant Professor in the Department of Nutrition (Secondary); Dr Emmanouil Apostolidis, Adjunct
Associate Professor of Nutrition; **Dr Dong Wang**, Assistant Professor in the Department of Nutrition (Secondary); and **Dr Luc Djousse**, Associate Professor in the Department of Nutrition (Secondary).

The Department held its 16th Annual Stare-Hegsted Lecture on November 8th this year. **Dr Shiriki K. Kumanyika**, Research Professor, Community Health and Prevention, Drexel University, was this year’s speaker. Dr Kumanyika’s talk, titled “The Syndemic Perspective on Obesity: Opening the Doors to New Solutions”, was delivered via Zoom with record-breaking attendance.

Our faculty and students have been widely recognized for their outstanding work. **Dr Josiemer Mattei** is named this year’s recipient of the Alice Hamilton Award. **Dr Miguel Ángel Martínez-González**, Professor at the University of Navarra, and Adjunct Professor of Nutrition, received the prestigious 27th edition of the Danone Institute Award in honor of his Scientific Career in Food, Nutrition and Health; **Dr Erica Kenney**, Assistant Professor of Public Health Nutrition, was selected as a recipient of this year’s Harvard GSAS Student Council’s (GSC) Everett Mendelsohn Excelling in Mentoring Award; **Dr Walter Willett**, Professor of Epidemiology and Nutrition, delivered the Harry A Feldman Memorial Lecture titled “Food, Health, and Environment: A Role for Epidemiology” in March at the American Epidemiological Society Meeting; **Mary Kathryn Poole**, PhD Candidate in Population Health Sciences, was selected as a Science and Innovation Fellow for 2021-2022 by The Center on the Developing Child; **Dr Simone Passarelli**, Research Fellow in Nutrition, was a recipient of the American Society for Nutrition (ASN) Foundation’s 2021 Scientific Achievement Awards.

Our faculty has continued to be successful in obtaining external funding. A New Center Grant has been awarded by NIH to an interdisciplinary team of investigators at HSPH, HMS, and the Broad Institute to establish a Dietary Biomarkers Development Center (DBDC) at Harvard. **Dr Frank Hu**, Chair and Professor of Nutrition and Epidemiology, serves as the PI and Director of the Center; **Dr Shilpa Bhupathiraju**, Assistant Professor of Nutrition, is the Project Director; **Dr Frank Sacks**, Professor of Cardiovascular Disease Prevention, is the PI of the Intervention Core; **Dr Qi Sun**, Associate Professor of Nutrition and Epidemiology, is the PI of the Biomarkers Project. This project is aimed to discover and validate novel food-based biomarkers that are critical for precision nutrition research and practice.

Thanks to the great efforts of our Communications Team (**Dr Lilian Cheung, Brett Otis, and Nancy Oliveira**), the popularity of our department website Nutrition Source has continued to grow, reaching nearly 14 million page views by the end of 2021. The Healthy Eating Plate page was once again a top destination, which received an interactive refresh.

This year, the department formed a Diversity Inclusion and Belonging (DIB) Committee, chaired by **Dr Erica Kenney**. A diversity and inclusion webpage has been added to the department website. The committee developed and deployed a climate survey within the department. The findings of the survey were shared with the department community and are being used as a guide for the committee’s future planning. The committee has worked with me to secure funding for URM MPH students. As a department, we are committed to DIB efforts and will continue to work with our faculty, staff, and students and the school leadership to promote diversity, equity, and inclusion.

Looking ahead to 2022, there are reasons for optimism despite the uncertainty and potential danger of the Omicron variant. During this holiday season, it is critical for all of us to stay vigilant with COVID precautions. It has been a privilege for me to work closely with so many talented and dedicated faculty, staff, and students, and I look forward with enthusiasm to the new year ahead.

Best wishes for a safe, healthy, and joyful holiday season!

Frank Hu
Chair, Department of Nutrition
**NEWS IN THE DEPARTMENT**

**GRANTS**

Dr Sheila Isanaka, Associate Professor of Nutrition, received a 3-year award from the Bill & Melinda Gates Foundation (USD $5.7 million) to test the effectiveness of a ready-to-use microbiome-directed food (MDF) against standard nutritional therapy in the community-based management of acute malnutrition. MDF is hypothesized to act in repair of the gut microbiota, improving nutrient absorption, reducing inflammation and increasing the likelihood of sustained recovery. The randomized trial will be conducted among children aged 6-24 months with acute malnutrition in rural Niger. Harvard Chan co-investigators include Dr Chris Sudfeld (Nutrition and GHP) who will serve as the study statistician and Dr Nicolas Menzies (GHP) who will support the complementary economic analysis.

Adjunct Professor Miguel A. Martinez-Gonzalez and former visiting scholar Estefania Toledo, together with Pilar Buil-Cosiales (a distinguished researcher of the PREDIMED study) were leaders of a recently funded grant by the Spanish NIH (Instituto de Salud Carlos III) to assess the metabolomic fingerprints of different dietary patterns and to test whether the relationship between diet and metabolomic fingerprints is similar in those with and without established cardiovascular disease (CVD). This grant will include genome-wide assessments to identify individuals with a greater metabolic response to diet both in people with and without CVD. It will also test the performance of different dietary assessment tools to be used in the forthcoming Spanish National large cohort IMPaCT which plans to recruit 200,000 participants from the general population and it is patterned after the model of the UK Biobank.

**PUBLICATIONS**

Dr Sabri Bromage, Fogarty Fellow, and colleagues published this Supplement in the Journal of Nutrition. Their work on the GDQS is described further in this issue of NutriNews:


**OTHER NEWS**

At the end of every year, our Communications Team (Dr Lilian Cheung, Brett Otis, and Nancy Oliveira) reviews The Nutrition Source’s site analytics to get a sense of the topics that captured the interest and attention of our visitors. To date, we’ve surpassed 13.8 million total pageviews for the year—the highest we’ve ever recorded. Here are some insights from 2021:

- The Healthy Eating Plate page was once again a top destination, which received an interactive refresh. 30+ translations of the plate are also available (most recently Turkish), with more in development (including Malay and multiple African languages).
- Content on vitamin and minerals continues to see increased interest, most notably potassium (which had a 1500% increase in pageviews from 2020) vitamin E (500% increase), and vitamin D (105% increase).
- Other pages receiving a notable increase in traffic included the microbiome, caffeine, sleep, anti-nutrients, and lectins.
Thanks to the assistance and support from multiple faculty reviewers, we were also able to update many existing articles and publish on a variety of new topics, including aquatic foods; the science of snacking and cravings; an anti-inflammatory diet review; a section on cancer prevention; reviews on collagen and workout supplements; as well as features on yoga and high-intensity interval training.

We also received positive feedback from visitors engaging with the first edition of our Healthy Living Guide, so we are pleased to announce the Healthy Living Guide 2021/2022 will be available to the general public in January. Along with a review of core healthy habits, many of the popular topics above are featured.

MONDAY NUTRITION SEMINARS

The Department of Nutrition holds its weekly Monday Nutrition Seminar Series every Monday throughout the academic year. The talks are varied, but they highlight the many different aspects of cutting-edge research that is currently being conducted in the fields of nutrition and global public health. These seminars are held from 1:00-1:50 pm and are free and open to the public. Because of COVID-19, the seminars have been presented via Zoom since March of 2020, and this zoom format will continue for now. A zoom link for viewing will be available one week prior to each seminar.

THIS ENDS OUR FALL 2021 MONDAY NUTRITION/GLOBAL HEALTH SEMINAR SERIES. OUR MONDAY SEMINARS WILL RESUME ON JANUARY 24, 2022.

NEW FACES IN THE DEPARTMENT

Jabina Tuladhar
Senior Grants & Contracts Manager

My name is Jabina Tuladhar. I am the Senior Grants and Contracts Manager in the Department of Nutrition. I joined the department in mid-July 2021. I finished my undergraduate degree from St. Cloud State University, MN. I finished my master’s from Johnson and Wales University, RI.

I was born and raised in Kathmandu, Nepal. I came to the US in 1999 for my undergraduate studies. I have always stayed away from home since I was a child, so I did not have any problem adapting to a new country, people, and culture. I met my husband while I was doing my undergraduate degree. We have an eight-year-old son, who usually keeps me busy and occupied. I love nature so I like going camping, hiking and going to the beach during summertime. Dancing, exercising, and trying new foods are the things that makes me happy.

I am excited to be here, and I look forward to working with you all.
Developing and Validating a Food-Based Global Diet Quality Score

Prepared by Sabri Bromage and Megan Deitchler, on behalf of the GDQS development team:

Poor diet quality is a major driver of both classical malnutrition and noncommunicable disease (NCD) globally. Until recently, the global community lacked a standard, relatively simple, and validated method for routinely measuring diet quality in terms of both nutrient adequacy and risk of diet-related noncommunicable disease (NCD) in diverse populations.

In 2018, Intake – Center for Dietary Assessment launched a 2-year research initiative to support a consortium of researchers at the Harvard T.H. Chan School of Public Health Department of Nutrition and National Public Health Institute (INSP), Mexico, to develop and validate simple and robust metrics of diet quality that would be appropriate for collection in routine population surveys and that would be fit for inclusion in global monitoring frameworks. Metrics were constructed, tested, and refined through analysis of existing food frequency questionnaire (FFQ) and 24-hour dietary recall data from cross-sectional and cohort studies in 10 African countries, China, India, Mexico, and the United States.

From these analyses, the team identified a Global Diet Quality Score (GDQS) that appeared to perform comparably with the Minimum Dietary Diversity - Women indicator in predicting energy-adjusted measures of nutrient adequacy and anthropometric and biochemical indicators of undernutrition, and comparably or better than the Alternative Healthy Eating Index - 2010 in capturing NCD-related outcomes (including metabolic syndrome, change in weight and waist circumference, and incident type 2 diabetes). While the GDQS was designed to be appropriate for use among non-pregnant, non-lactating women of reproductive age in low- and middle-income countries (LMICs), it has also been shown through secondary analysis to be valid for use in men and in high-income countries. Detailed information about the design and performance of the GDQS can be found in a recent supplemental issue in the Journal of Nutrition: https://academic.oup.com/jn/issue/151/Supplement_2.

In contrast with other simple diet quality metrics, the GDQS has several novel features. (1) Unlike most existing diet metrics, the GDQS is designed to be sensitive to outcomes associated with both undernutrition and overnutrition. (2) The metric is entirely food-based and therefore does not require the use of a food composition table for analysis. (3) The GDQS includes an expanded set of food groups in comparison to most existing simple food-based metrics that allow it to be applied to a range of global diets, (4) and incorporates a measure of quantity of consumption in metric scoring to allow for a more sensitive assessment of healthy diets.

Various data can be used to derive the GDQS, including quantitative 24-hour dietary recall or FFQ data. To facilitate routine data collection for the GDQS, Intake has also developed an electronic data collection app to provide a simple method to collect population GDQS data at relatively low cost and with low respondent burden. Guidelines on different options for collecting GDQS data can be found here: https://www.intake.org/news/global-diet-quality-score-data-collection-options-and-tabulation-guidance.

GDQS data are intended to be reported and used at the population or sub-group level, not at the individual level. GDQS data can be used for population-based assessment, target-setting, program and policy design, and cross- or within-country comparison. The GDQS is also appropriate for assessing population-level changes in diet quality and can therefore also be used for monitoring and evaluation of programs and policies that aim to improve diet quality.

UNIVERSITY DEPARTMENT OF NUTRITION

UPDATES FROM THE DEPARTMENT’S DIB COMMITTEE
(By Bristian Justice, Departmental Liaison Committee Member)

Welcome to the third of monthly updates regarding Diversity, inclusion and Belonging within the Department of Nutrition! This column will provide updates regarding NUT-DIB committee efforts along with departmental-wide updates for newest developments, changes, and initiatives. While we are currently establishing useful forms of communication to/from the committee, please feel free to submit anonymously via our Qualtrics form https://harvard.az1.qualtrics.com/jfe/form/SV_8D642fDG6wcRNUG

Seasons Greetings from the NUT-DIB Committee. For the last issue of the 2021 year, we are happy to announce action plan items for calendar year 2022. Our current items consist of curriculum review with the intent to provide better health equity content, along with transparency efforts to release seminar/training. On a school level we are collaborating with all other departments within the Harvard TH Chan School of Public Health to review/compare similar practices related to our action plan items. Our goal is to become in sync with our initiatives while also providing specialized content pertaining to specific needs of development based on departmental necessities. On behalf of the NUT-DIB Committee, we wish everyone a wonderful holiday season, and a Happy New Year. See you in 2022!

NUTRITION SOURCE UPDATES

Yoga for exercise
Some estimates suggest that 300 million people worldwide practice yoga. There are more than a dozen styles of yoga, but most combine poses and movements with breathing exercises and relaxation. Learn more: https://www.hsph.harvard.edu/nutritionsource/yoga/

Spotlight on mindful eating
Mindful eating stems from the broader philosophy of mindfulness, a widespread, centuries-old practice used in many religions. Learn seven practices of mindful eating, as well as tips for incorporating this approach in your daily life: https://www.hsph.harvard.edu/nutritionsource/mindful-eating/

If you would like to remain current as to what is happening in the field of nutrition, please be sure to view our Nutrition Source website for the latest updates!

(See: https://www.hsph.harvard.edu/nutritionsource/)