

NUTRI NEWS

The Department of Nutrition

March, 2022

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NEW FACES IN THE DEPARTMENT



Vanessa Beauregard
Research Assistant

Hi, my name is Vanessa Beauregard, and I am the new part-time research assistant for the nutrition questionnaire service center. I am working under **Laura Sampson**. I live near Newburyport, and I am currently in school to get my master's in nutrition to become a Registered Dietician. Before going back to school to pursue nutrition, I was working as an Exercise Physiologist at a small gym run by Physical Therapists. Besides school, I also like to dance. Although I don't dance formally now, I still like to use dance as a mode of exercise. I also have recently started skiing and roller blading. I also really enjoy camping and recently was gifted a paddleboard by my boyfriend which I am excited to get to use this summer.

Thank you for welcoming me into the Nutrition Department!

Ando Ravelomanantsoa Miharifetra
Visiting Scientist

Hi Folks, my name is Ando Ravelomanantsoa Miharifetra, a very long name to remember, but just call me Ando. I am a new visiting scientist from Madagascar and doing a 3-month training in human fecal parasitology at the Nutrition Department- Harvard T.H. Chan School of Public Health.

I hold two degrees from the University of Antananarivo (Madagascar): Doctor of Veterinary Medicine in 2009 and a University degree on Vaccinology and Infectiology in 2016. I have a Master of Science on Tropical Animal Health from the Institute of Tropical Medicine Antwerp in 2013 and a Postgraduate diploma in Endangered Species Recovery from the University of Kent in 2018. I have been leading the poultry disease interventions with Madagascar Health and Environmental Research (MAHERY) for the last several years.

I will be working with **Dr Christopher Golden** in a new research project with Health in Harmony in Manombo, Farafangana (Madagascar). Our research is focused on the intersection of deforestation, nutrition and co-infection diseases.

And Vet as I am, I really love take care of pets!!!!

Misaotra (Thank you) all for the many warm welcomes and hope to meet you sometimes in the hall!



Santino Andry
Visiting Scientist

Mbola tsara jiaby! Greetings! My name is Santino, and I am a biologist from the University of Antananarivo Madagascar interested in conservation ecology and involved in surveillance of zoonoses on Madagascar fruit bats. I recently got my Master degree in Entomology-Crop, Breeding, and Health, where I studied the impacts of forest fragmentation on ant assemblages in central eastern Madagascar. I was been appointed at the Nutrition Department for 4 months to work with **Dr Christopher Golden** on intestinal parasite identification.

I was born and grew up in Diego-Suarez, a beautiful city in the North of Madagascar. I am in love with tiny bugs and I really like nature in general. I am lucky to be surrounded by super mentors and colleagues but one of them is special for me, **Dr Cara Brook**, University of Chicago. She really boosted my career and made me love bats and zoonoses.

My background consists of multi-disciplinary fields and is atypical for an early career researcher. I am always in search of new skills, mentors, collaborators and friends around the world!

NEWS IN THE DEPARTMENT

GRANTS

Dr David Eisenberg, PI, and his team have been awarded \$35,000 from NIH in support of the 2022 Teaching Kitchen Research Conference to be hosted by the Department of Nutrition and held at the UCLA campus on October 18-19, 2022. For more information, please see flyer elsewhere in this newsletter.

AWARDS

Dr Anne-Julie Tessier, Postdoctoral Research Fellow, was the recipient of the 2022 Canadian Nutrition Society PhD Dissertation Award for Outstanding Research. Her PhD was completed at McGill University, Montreal, Canada. The title of her dissertation was "The interplay between sarcopenia, physical and cognitive functions, and the role of nutrition as a modifiable risk factor in aging". The recipients of the prestigious CNS achievement awards have contributed to improving our knowledge and expertise in nutrition and have helped to significantly advance the field.

DISSERTATION DEFENSES

Cristina Gago successfully defended her dissertation titled "Multilevel approaches to nutrition promotion for low-income households with young children" on March 21, 2020, 9:00 – 11:00 am. Her defense was a virtual one. Christina is headed to a postdoc position next at NYU. Specifically, she will be working under the mentorship of **Antoinette Schonethaler** at the Center for Healthful Behavior Change at NYU Grossman School of Medicine.

Sophia Hua will defend her dissertation titled "Exploring Strategies to Promote A Healthier Food Environment" on April 27, 2022, 12:00 – 2:00 pm – hybrid FXB G-11
<https://harvard.zoom.us/j/94212464549?pwd=YjdlZGp0TDkxTzAxZTlhcTViNUVnUT09> Password: Booster

Abrania Marrero-Hernandez will defend her dissertation titled "Reclaiming island food systems for nutrition and planetary health" on April 29, 2022, 1:00–3:00 pm.
<https://harvard.zoom.us/j/92597469475?pwd=b0VrTkldnJEUGRabzNaYld0VjhQZz09> Password: Booster

PUBLICATIONS

Dr Christopher Golden, Assistant Professor of Nutrition and Planetary Health, and his colleagues have published the following open-access articles:

The first paper is a material flow analysis to look at the efficiency of the seafood omega-3 supply chain and how it could be improved through supply chain optimization. The impacts of this optimization would be significant for supplying this important nutrient to deficient populations.

Shepon, A., T. Makov, H. A. Hamilton, D. B. Müller, J. A. Gephart, P. J. G. Henriksson, M. Troell, **C. D. Golden** (2022). Sustainable optimization of global aquatic omega-3 supply chain could substantially narrow the nutrient gap. *Resources, Conservation & Recycling* 181, 106260.

The second paper harnesses remote sensed predictions of soil moisture and NDVI to analyze the performance of these remote sensed products on actual crop productivity data in Madagascar. The results of this research showed that there is high predictive capacity for remotely sensing productivity of Madagascar's main staple crops, which comprise roughly 60% of the country's calories, and could even be used to predict future crop failure.

Rigden, A.J., **C. D. Golden**, and P.J. Huybers (2022). Retrospective predictions of rice and other crop production in Madagascar using soil moisture and an NDVI-based calendar from 2010-2017. *Remote Sensing* 14(5), 1223.

PRESENTATIONS:

Dr Marta Guasch-Ferre, Senior Research Scientist, was invited to present at a Virtual Seminar, Whitaker Cardiovascular Institute, Boston University School of Medicine on Tuesday, March 22, 2022. Her Zoom talk was titled "The Mediterranean diet, metabolomics, and cardiovascular disease".

Faculty & Research Scientist Appointments

Kyu Ha Lee, PhD, has been reappointed as Assistant Professor of Integrative Genomic Epidemiology.

Kirsten Davison, PhD, has been reappointed as Adjunct Professor of Nutrition.

Stephen DeVries, MD, has been newly appointed as Adjunct Associate Professor of Nutrition. Dr DeVries will teach a new 1.25 credit winter session course starting during the 2022/2023 academic year titled: *Integrating Nutrition into Clinical Medicine: The Role of Health Professionals as Change Agents*. This course will provide a brief overview of key issues in public health nutrition, the health and economic consequences of the lack of nutrition education and practice in medicine, and the role of health professional as change agents. This course will fill a critical void in our curriculum for those with clinical backgrounds whose future work will be in the academic medical environment. In addition to developing and teaching this new course, Dr. DeVries is actively involved in developing online educational programs on nutrition for health professionals, including a recently launched course on nutrition and climate change developed in collaboration with **Drs Walter Willett** and **Christopher Golden** of our department.

Kjetil Bjornevik, MD, PhD, has been promoted to Senior Research Scientist.

Dr Jennifer Massa, ScD, was reappointed as Research Scientist

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.

The following speakers will present in April 2022:

- | | |
|---------------|---|
| Apr 4 | Dr Neena Prasad , Director, Food Policy Program, Bloomberg Philanthropies – "Reducing Demand for Ultra-Processed Products: Policy innovations from around the world" – NGHP |
| Apr 11 | Dr Emmanouil Apostolidis , Adjunct Associate Professor of Nutrition, HSPH – "Mechanistic approach for the development of food products and ingredients for glucose management" |

Apr 18 **Dr Fred Tabung**, Visiting Scientist, Department of Nutrition, HSPH – TBD

Apr 25 **Dr Frank Sacks**, Professor of Cardiovascular Disease Prevention, HSPH - TBD

RESEARCH NEWS

Study Suggests Higher Protein Intake Is Associated with Lower Odds of Cognitive Decline

A recent study led by **Dr Tian-Shin Yeh**, Research Fellow, and colleagues from the Department of Nutrition aimed to investigate the associations between long-term dietary protein intake and subsequent subjective cognitive decline (SCD). Although diet has been shown to be one of the modifiable risk factors for cognitive decline, studies on dietary protein intake and cognitive decline have remained limited and inconclusive.

Yeh and colleagues included 49,493 women from the Nurses' Health Study (NHS) (1984–2006) and 27,842 men from the Health Professionals Follow-up Study (HPFS) (1986–2002). For the NHS, average dietary intake was calculated from 7 repeated semi-quantitative FFQs (SFFQs), and SCD was assessed in 2012 and 2014. For the HPFS, average dietary intake was calculated from 5 repeated SFFQs, and SCD was assessed in 2008 and 2012. Poisson regression was used to examine the associations between dietary protein, amino acids, and various protein food sources with subsequent SCD.

Results indicate that higher protein intake compared with total carbohydrates was associated with lower odds of SCD. For protein food sources, higher intakes of beans/legumes, fish, and lean poultry were significantly associated with lower odds of SCD, but higher intake of hot dogs was associated with higher odds of SCD.

Thus, higher protein intake was associated with lower odds of SCD when compared isocalorically with carbohydrate. Plant protein sources were also associated with lower odds when compared with animal protein sources. Findings suggest that adequate protein intake, and choices of protein sources could play a role in the maintenance of cognition and should be studied further.

Tian-Shin Yeh, Changzheng Yuan, Alberto Ascherio, Bernard A Rosner, Deborah Blacker, Walter C Willett, Long-term dietary protein intake and subjective cognitive decline in US men and women, *The American Journal of Clinical Nutrition*, Volume 115, Issue 1, January 2022, Pages 199–210, <https://doi.org/10.1093/ajcn/nqab236>

Yeh's paper was accompanied by the following extracted editorial in AJCN:

The global incidence of dementia is approximately 10 million cases per year, with a total prevalence of ~50 million, a figure that is projected to rise to 152 million by 2050. Dementia-related costs were estimated to be \$818 billion in 2015, roughly equivalent to 1.1% of global gross domestic product. The true impact of the disease is well beyond what can be evaluated, due to challenges experienced by those affected, as well as the impacts on caregivers, their families, and the medical system. These trends have received increasing attention from the WHO, which has prioritized the preservation of cognitive function among the elderly population. Dementia is typically chronic and progressive, and currently treatments are not available to slow its progression or prevent its onset; consequently, an increasing focus has been placed on modifiable lifestyle factors that influence dementia risks.

Yeh's study represents a tremendous advance in this area. It is especially notable because of the lack of information in this area from large, high-quality, longitudinal studies. Yeh et al. performed an exceptionally strong, in-depth analysis of this subject.

Lydia A Bazzano, Sara G Woltz, The importance of midlife diet in late life cognitive outcomes, *The American Journal of Clinical Nutrition*, Volume 115, Issue 2, February 2022, Pages 323–324, <https://doi.org/10.1093/ajcn/nqab413>

Long-term Dietary Flavonoid Intake and Subjective Cognitive Decline

Another recent study by **Dr Tian-Shin Yeh** and colleagues in the Department of Nutrition published a study in *Neurology* that prospectively examined the associations between long-term dietary flavonoids and subjective cognitive decline (SCD) in US men and women.

The researchers followed 49,493 women from the Nurses' Health Study (NHS) (1984–2006) and 27,842 men from the Health Professionals Follow-Up Study (HPFS) (1986–2002). For the NHS, long-term average dietary intake was calculated from 7 repeated semiquantitative food frequency questionnaires (SFFQs), and SCD was assessed in 2012 and 2014. For the HPFS, average dietary intake was calculated from 5 repeated SFFQs, and SCD was assessed in 2008 and 2012.

Results indicate that after adjustment for age, total energy intake, major nondietary factors, and specific dietary factors, higher intake of total flavonoids was associated with lower odds of SCD. In a comparison of the highest vs the lowest quintiles of total flavonoid intake, the pooled multivariable-adjusted odds ratio (OR) of 3-unit increments in SCD was 0.81 (95% confidence interval [CI] 0.76, 0.89). In the pooled results, the strongest associations were observed for flavones (OR 0.62 [95% CI 0.57, 0.68]), flavanones (0.64 [0.58, 0.68]), and anthocyanins (0.76 [0.72, 0.84]) (p trend <0.001 for all groups). The dose-response curve was steepest for flavones, followed by anthocyanins. Many flavonoid-rich foods such as strawberries, oranges, grapefruits, citrus juices, apples/pears, celery, peppers, and bananas, were significantly associated with lower odds of SCD.

In other words, the findings of Yeh et al. support a benefit of higher flavonoid intakes for maintaining cognitive function in US men and women.

Long-term Dietary Flavonoid Intake and Subjective Cognitive Decline in US Men and Women
Tian-Shin Yeh, Changzheng Yuan, Alberto Ascherio, Bernard A. Rosner, Walter C. Willett, Deborah Blacker
Neurology Sep 2021, 97 (10) e1041-e1056; DOI: 10.1212/WNL.00000000000012454

Dr Frank Hu Speaks with CNN about Precision Nutrition

Dr Frank Hu, Fredrick J. Stare Professor of Nutrition and Epidemiology, and Chair, Department of Nutrition, was recently interviewed by Lisa Drayer of *CNN* about how the precision nutrition approach could shape the future of dietary advice.

When asked how precision nutrition differs from current nutrition advice, Hu replied that "The idea of precision nutrition is to have the right food, at the right amount, for the right person. Instead of providing general dietary recommendations for everyone, this precision approach tailors nutrition recommendations to individual characteristics, including one's genetic background, microbiome, social and environmental factors, and more. This can help achieve better health outcomes".

Hu elaborates on this by explaining why there is no one-size-fits-all prescription when it comes to what we should be eating. According to Hu, "Not everyone responds to the same diet in the same way. For example, given the same weight-loss diet, some people can lose a lot of weight; other people may gain

weight. A recent [study in JAMA](#) randomized a few hundred overweight individuals to a healthy low-carb or low-fat diet. After one year, there was almost an identical amount of weight loss for the two groups, but there was a huge variation between individuals within each group -- some lost 20 pounds. Others gained 10 pounds”.

When asked about how much of a role our individual genes play in our risk of disease, and whether our behavior mitigate our disease risk, he pointed out that our health is affected by both genes and diets, which constantly interact with each other because certain dietary factors can turn on or off some disease-related genes. However, genes are not our destiny because healthy diet and lifestyle could offset harmful effects of “bad” genes.

Hu cautions that genetic and microbiome tests are not cheap, and the promise that this test can help develop a personalized meal plan that can improve blood sugar and blood cholesterol ... well, at this point, the data are not conclusive.

His final takeaway message is that ***new technologies cannot substitute general nutrition principles such as limiting sodium and added sugar and eating more healthy plant foods***. In a few years, you may be able to get a more useful response from Alexa if you ask her what you should eat -- but like other answers from Alexa, you'll have to take it with a grain of salt.

To read the CNN interview: <https://www.cnn.com/2022/03/27/health/nutrition-future-drayer-wellness/index.html>

Vitamins and supplements are still important but won't reduce COVID risk

New research suggests that although vitamins are an important part of overall health, they don't play a large role in protecting against COVID-19. Findings indicate that vitamin C, vitamin D, and zinc—which have long been touted for their immune-boosting properties—didn't decrease people's risk of dying from COVID-19. Vitamin D was linked with a lower intubation rate and a shortened hospital stay among COVID-19 patients, but the researchers said more evidence is needed to support those findings.

Several experts, including **Dr Walter Willett**, Professor of Epidemiology and Nutrition, said in a February 28, 2022 Health.com article said that the best way to prevent severe illness and death from COVID-19 is to get vaccinated.

Willett, who wasn't involved in the new study, explained that even though vitamins haven't been shown to reduce COVID-19 mortality risk, people still need many essential nutrients to function. “In some ways, the body and its immune system is like a car,” he said. “You need all the parts running and in good repair, and if you take out one critical part, it doesn't work very well.”

Willett further noted, however, that if you take supplements that you don't need or that your doctor hasn't recommended, you could increase your risk of side effects or even vitamin toxicity. He said that if you think you're deficient in any vitamins, you should check with your doctor, and consider eating plenty of vegetables and fruits and other healthy foods because “supplements can't take the place of a healthy diet.”

From: <https://www.hsph.harvard.edu/news/hsph-in-the-news/vitamins-supplements-wont-reduce-covid-risk/>

Read the Health.com article: <https://www.health.com/condition/infectious-diseases/coronavirus/vitamins-covid-19-mortality-risk>

UPDATES FROM THE DEPARTMENT'S DIB COMMITTEE

(By Bristian Justice, Departmental Liaison Committee Member)

Welcome to the fourth of our 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

Happy Spring to Everyone! We are delighted to announce the ODI training sessions on “Unconscious Bias” have been offered/completed within the Department of Nutrition. Thank you to all participants who took the time to attend along with a special thank you to **Lilu Barbosa**, Chief Diversity Inclusion & Belonging Officer & **Jennifer Castro**, Director of Strategic Projects and Diversity Education, who were our presenters. Their engagement and dedication to this work is meaningfully treasured. As a committee we wanted to deliver a helpful, insightful, and meaningful training that provided you with personal tools that you can use in everyday life.

NUTRITION SOURCE UPDATES

Explore the Healthy Eating Plate

Did you know that March is National Nutrition Month? Our Healthy Eating Plate provides a blueprint for building healthy, balanced meals—whether served at the table or packed in a lunch box. Check out the interactive plate: <https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/>

Nutrient feature: Phosphorus

Phosphorus is a mineral that naturally occurs in many foods and is also available as a supplement. It is a key element of bones, teeth, and cell membranes, and plays multiple roles in the body.

<https://www.hsph.harvard.edu/nutritionsource/phosphorus/>

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/>)

5 Years

Ming Ding
Luis Hernandez
Kathleen Johnson
Amelia Zhang Gross

****15 Years****

Becky Mozaffarian

*****20 Years*****

Jen Massa
Sandy Munger

******25 Years******

Ed Giovannucci

*******30 Years*******

Laura Sampson Kent

Please join us in
congratulating
our 23rd Annual
Nutrition Stars!

THANK YOU!



SAVE THE DATE!

We are pleased to announce that the Department of Nutrition at the Harvard TH Chan School of Public Health will hold its 17th Annual Stare-Hegsted Lecture on Monday, November 14, 2022, from 4:00-5:15 pm.*



Dr Alice H. Lichtenstein, DSc, Tufts University, will be this year's speaker. Dr Lichtenstein, who is an alumna of the Department of Nutrition, is a senior scientist and director of the [Cardiovascular Nutrition Laboratory at the HNRCA](#), as well as the Stanley N. Gershoff Professor of Nutrition Science and Policy at the Friedman School. Dr Lichtenstein also serves as the executive editor of the [Tufts University Health & Nutrition Letter](#) and Associate Editor of the [Journal of Lipid Research](#)

Dr Lichtenstein's general research focus is on assessing the interplay between diet and heart disease risk factors, specifically addressing issues related to *trans* fatty acids, soy protein and isoflavones, sterol/stanol esters, novel vegetable oils differing in fatty acid profile and glycemic index, in postmenopausal females and older males. Selected issues have been investigated in animal models and cell systems with the aim of determining the mechanisms by which dietary factors alter cardiovascular disease risk. Additional work is focused on population basis studies to assess the relationship between cholesterol homeostasis biomarkers and nutrient biomarkers, and cardiovascular disease risk; the application of systematic review methods to the field of nutrition, and the impact of taste acuity on food choices and cardiometabolic risk.

Dr. Lichtenstein was vice-chair of the 2015 Dietary Guidelines Advisory Committee (DGAC) of the USDA/HHS. She also served on the 2000 DGAC. Dr. Lichtenstein has chaired AHA's Nutrition Committee, and served on the 2013 AHA/ACC' task forces on practice guidelines to reduce CVD risk.

***Should current Covid restrictions be lifted by that time, Dr Lichtenstein will deliver her lecture in person, final time and venue TBD. Otherwise, this will be a zoom presentation.**

MARK YOUR CALENDARS NOW!

Early bird registration is currently available.
REGISTER NOW! <https://tkresearchconference.org/>



Register for the 2022 Teaching Kitchen Research Conference and connect with health professionals, researchers, educators, food system experts and others from around the globe dedicated to the improvement of personal and public health.

two days of...

- Inspiring speakers
- Cutting-edge original research
- Interactive breakout sessions
- Cooking demos & tastings*

Don't miss this opportunity to learn how teaching kitchens are being applied across a diverse spectrum of populations & venues; the business case for teaching kitchens; and the life-long impact these programs can make!

Early Bird Registration Now Open

Abstract submissions opening in April 2022



Funding for
this
conference
was made

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The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

*In the event that local municipalities, state health boards, sponsoring institutions or CDC guidance restricts the opportunity for an in-person gathering in October 2022, the conference will be conducted virtually, and all in-person tickets will be converted to the standard virtual program pricing, and the difference will be refunded accordingly.