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Register now for our Annual Symposium: Global Food Systems and Sustainable Nutrition in the 21st Century

Join us for our 22nd Annual Symposium, featuring an outstanding lineup of speakers in the fields of public health, global food systems, nutritional inequities, and sustainable nutrition. [Click here](#) to register now. More information, including the full list of speakers, can be found on the [event webpage](#).

Request for Applications: Pilot & Feasibility Grants

The NORCH is now accepting applications for Pilot & Feasibility funding for projects related to nutrition, obesity, and metabolism. Up to \$30,000 per project is available. The deadline for applications is April 1, 2021. Please [click here](#) for information on eligibility, application procedure, and more.

Seeking Nominations for the NORCH Outstanding Manuscript Award

The NORCH is currently accepting nominations for our annual Outstanding Manuscript Award. This award is intended for an Assistant Professor, Instructor, or Post-Doctoral Fellow who has made a significant scientific contribution as first author of a manuscript related to nutrition, obesity, and/or metabolism.

Please [click here](#) for more information and to submit your nomination for Outstanding Manuscript. The deadline for nominations is April 1, 2021.

Opportunity to Attend the 2021 Blackburn Course in Obesity Medicine

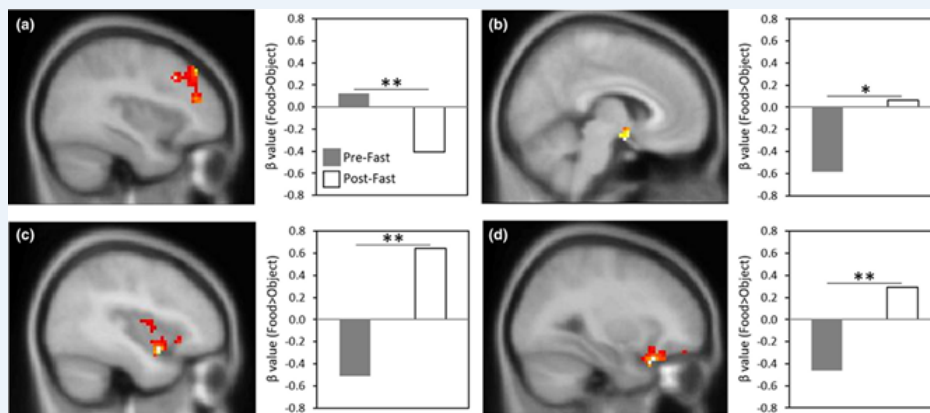
The NORCH is delighted to sponsor up to 4 attendees for the Blackburn Course in Obesity Medicine, directed by Dr. Lee Kaplan, NORCH Associate Director. The course will be held virtually on June 15-19, 2021. Visit the [course webpage](#) for more info.

[Click here](#) to express interest by April 16, 2021 to be considered. You must be a trainee or faculty member at a Harvard affiliate institution to be eligible. Preference will be given to trainees, junior faculty, and those from underrepresented backgrounds.

From the Metabolic Imaging Core: Overeating and fasting alter neural fMRI responses to visual food cues

Healthy individuals process visual food cues of different caloric value differently based on their degree of hunger or satiety. The effect of prolonged nutritional modification accompanied by weight change has not previously been well described, however, and was investigated in this work aided by the [Metabolic Imaging Core](#) and conducted by NORCH Associate Director Dr. Elizabeth Lawson.

Seven healthy adults with ideal body weight 101-120% underwent a 10-day inpatient high calorie diet (HCD) intervention (mean BMI increase 6.8%), followed by a 13-18 day washout, and then a 10-day inpatient fast (mean BMI decrease 8.1%). Functional MRI was performed in the fasting state on the first and last day of each diet intervention, using a food motivation paradigm with visual cues of high-calorie and low-calorie foods as well as non-food objects.



From Kerem et al., *Physiol Rep* 2021; 8(24):e14639. ©The Authors. *Physiological Reports*. Used under the terms of the Creative Commons Attribution license

Following the HCD, hypothalamic BOLD response was attenuated in response to high- versus low-calorie food cues, reflecting homeostatic control. After 10 days of fasting, there was increased activation in response to food versus non-food cues in the hypothalamus (figure, b), anterior insula (figure, c), and orbitofrontal cortex (figure, d), and reduced activation in the dorsolateral prefrontal cortex which exercises inhibitory control (figure, a). These data show that prolonged over- or under-nutrition with accompanying weight change causes changes in the saliency and reward value of food cues.

Kerem L, **Holsen L**, Fazeli P, **Bredella MA**, Mancuso C, Resulaj M, Holmes TM, Klibanski A, **Lawson EA**. Modulation of neural fMRI responses to visual food cues by overeating and fasting interventions: A preliminary study. *Physiol Rep*. 2021 Jan;8(24):e14639. doi: 10.14814/phy2.14639. PMID: [33369272](#)

Our work as a Center is measured in part by the contributions we make to published science. Please cite the NIH Grant **P30 DK040561** in all publications that result from the use of NORCH services or resources.

Recent Publication Highlights from the NORCH Research Base

Rao C, Coyte KZ, Bainter W, Geha RS, **Martin CR**, **Rakoff-Nahoum S**. Multi-kingdom ecological drivers of microbiota assembly in preterm infants. *Nature*. 2021 Feb 24. doi: 10.1038/s41586-021-03241-8. Online ahead of print. PMID: [33627867](#)

Madzorera I, Ghosh S, Wang M, **Fawzi W**, Isanaka S, Hertzmark E, Namirembe G, Bashaasha B, Agaba E, Turyashemererwa F, Webb P, **Duggan C**. Prenatal dietary diversity may influence underweight in infants in a Ugandan birth-cohort. *Matern Child Nutr* 2021 Feb 17:e13127. doi:10.1111/mcn.13127. Online ahead of print. PMID: [33595899](#)

Ngo D, Benson MD, Long JZ, Chen ZZ, Wang R, Nath AK, Keyes MJ, Shen D, Sinha S, Kuhn E, Morningstar JE, Shi X, Peterson BD, Chan C, Katz DH, Tahir UA, Farrell LA, Melander O, Mosley JD, Carr SA, Vasan RS, Larson MG, Smith JG, Wang TJ, Yang Q, **Gerszten RE**. Proteomic profiling reveals novel biomarkers and pathways in Type 2 diabetes risk. *JCI Insight*. 2021 Feb 16:144392. doi: 10.1172/jci.insight.144392. Online ahead of print. PMID: [33591955](#)

Vadiveloo M, Guan X, Parker HW, Perraud E, Buchanan A, Atlas S, **Thorndike AN**. Effect of Personalized Incentives on Dietary Quality of Groceries Purchased: A Randomized Crossover Trial. *JAMA Netw Open*. 2021 Feb 1;4(2):e2030921. doi: 10.1001/jamanetworkopen.2020.30921. PMID: [33566105](#). Free PMC article.

Rahman ML, Doyon M, Arguin M, Perron P, Bouchard L, **Hivert MF**. A prospective study of maternal adiposity and glycemic traits across pregnancy and mid-childhood metabolomic profiles. *Int J Obes (Lond)*. 2021 Jan 27. doi: 10.1038/s41366-021-00750-4. Online ahead of print. PMID: [33504931](#)

Zhang L, Abohashem S, Osborne MT, Naddaf N, Park R, Moore K Jr, Patrich T, Deeks SG, Hsue PY, **Tawakol AA**. Lower Socioeconomic Status Associates with Greater Systemic and Arterial Inflammation in HIV. *J Acquir Immune Defic Syndr*. 2021 Jan 20. doi:10.1097/QAI.0000000000002630. Online ahead of print. PMID: [33492022](#)

Featuring: Dr. Christopher Duggan and Dr. Elsie Taveras, the New Director and Associate Director of the Division of Nutrition at HMS

Since its inception in 1996, the [Division of Nutrition](#) (DON) at Harvard Medical School has had a close working relationship with the NORCH, most significantly through collaboration on educational programs such as the [Annual NORCH Symposia](#) and the DON Longwood Nutrition Seminar Series. With Dr. Christopher Duggan (NORCH Co-Associate Director and Executive Committee Member) and Dr. Elsie Taveras (NORCH Full Member) as DON Director and Associate Director, respectively, the strong, collaborative relationship between the two entities will continue to build and support the nutrition, obesity and metabolism research and medical communities through our joint initiatives.

Congratulations to Dr. Duggan and Dr. Taveras on their new positions at the DON!



Dr. Christopher Duggan, MD, MPH

In addition to his appointments at the NORCH and the DON, Dr. Duggan is the Director of the Center for Nutrition at Boston Children's Hospital. He is a Professor of Pediatrics at Harvard Medical School and a Professor in the Departments of Nutrition and Global Health and Population at Harvard T.H. Chan School of Public Health.

He is highly regarded for his clinical work and research related to gastrointestinal and nutritional diseases in children in the US and internationally. His current active projects include a multicenter trial of antibiotics for severe childhood diarrhea (with 5,000 children enrolled in 3 South Asian and 4 Sub-Saharan African sites) and a trial of zinc dosages for acute diarrhea (4,500 children are being enrolled in India and Tanzania).

Dr. Elsie Taveras, MD, MPH

Dr. Taveras is the Chief of the Division of General Pediatrics and Executive Director of the Kraft Center for Community Health at MGH. She is also the Conrad Taff Professor of Pediatrics in the Field of Nutrition at Harvard Medical School and a Professor of Nutrition at Harvard T.H. Chan School of Public Health.

She has earned wide recognition for her research, which focuses primarily on the determinants of obesity for women and children. She also has led several studies relating to the development of clinical, home, community, and systems-level interventions to prevent and manage obesity, particularly for underserved populations. She received the 2016 Public Health Leadership in Medicine Award from the MA Association of Public Health for her work to improve community-based care.



Local Events

Longwood Nutrition Seminar

Division of Nutrition at Harvard Medical School
Tuesday, March 2, 2021, 12pm, Virtual

“Vitamin D and HIV” Christopher R. Sudfeld, Sc.D.,
Assistant Professor, Global Health and Nutrition,
Harvard T.H. Chan School of Public Health

This series occurs on a monthly basis.
[Click here](#) for Zoom details.

Monday Nutrition Seminar Series

Dept of Nutrition, Harvard T. H. Chan School of Public Health
Monday, March 8, 2021, 1pm, Virtual

Caitlin Caspi, ScD, *Associate Professor*, Allied Health
Sciences, UConn Rudd Center for Food Policy and
Obesity

This series occurs on a weekly basis.
[Click here](#) for more information.

Adipose Seminar Series

Boston Nutrition Obesity Research Center (BNORC)
Tuesday, March 9, 2021, 10am, Virtual

“Macrophages as Adipose Tissue Ferrostats” Alyssa
Hasty, Ph.D., *Cornelius Vanderbilt Professor*, Molecular
Physiology and Biophysics, Vanderbilt University

This series occurs on a biweekly basis.
[Click here](#) for more information.

The 22nd Annual Harvard Nutrition Obesity Symposium: Global Food Systems and Sustainable Nutrition in the 21st Century

Nutrition Obesity Research Center at Harvard (NORCH)
Tuesday, June 15, 2021, 8am-5:30pm, Virtual

This event will feature an outstanding lineup of
speakers in the fields of public health, global food
systems, food inequity, and sustainable nutrition.

[Click here to register now](#) or [visit our website](#) for
more details. Registration is free for all attendees.

National NORC Events

UNC NORC P&F Symposium: “From Pilot Data to Federal Funding: Lessons from P&F Program Award Winners”

UNC Nutrition Obesity Research Center
Thursday, March 11, 2021, 2-4pm

The symposium will feature keynote speaker Dr.
Penny Gordon-Larsen and UNC NORC P&F award
winners. Speakers will discuss their current research,
their experiences as P&F awardees, and their
transitions from gathering pilot data to securing
federal funding.

[Click here](#) for event and registration information.

Virtual Short Course on Nutrigenetics, Nutrigenomics and Precision Nutrition

UNC Nutrition Research Institute and UNC NORC
May 19-20, 26-27 & June 2-3, 2021, Virtual

Registration is now open. [Click here](#) for more course
information.

Interdisciplinary Nutrition Sciences Virtual Symposium 2021: Heterogeneity in Obesity: Implications for Cancer and Related Obesity- Associated Outcomes

UNC NORC
June 21-22, 2021, Virtual

[Click here](#) for event details, abstract submission, and
registration information.

Limited sponsored registrations are available for 1)
scientists from underrepresented populations and 2)
early career scientists.

Contact Us

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