



PRECISION NUTRITION

RESEARCHING HOW EACH OF US CAN EAT UNIQUELY FOR OPTIMAL HEALTH

An internationally recognized center, the UNC Nutrition Research Institute (NRI) conducts innovative basic and translational science to establish how individual differences in nutrient requirements and responses to diet affect our nutritional needs.

The NRI is a unit of the University of North Carolina at Chapel Hill and is located on the North Carolina Research Campus in Kannapolis, NC. NRI principal investigators hold faculty appointments in the departments of Nutrition and Psychology and the School of Social Work at UNC-Chapel Hill. Their research questions nutrient roles in disease prevention and risk with an emphasis on some of the most urgent nutrition-related, chronic health concerns facing our society today—brain health, cancer, and cardiometabolic diseases—across the lifespan from periconception through aging.

Our scientists have demonstrated, in specific populations, the need for certain essential nutrients, the high-risk nature of some diets, the link between obesity and cancer, and the

prevalence of fetal alcohol spectrum disorders. This work explores the impact of gene-environment and gene-nutrient interactions by using advanced approaches including nutrigenetics, epigenetics, nutrigenomics, metabolomics and microbiomics.

The NRI houses research cores that offer a wide range of services to researchers. Cores offer shared resources including cutting-edge technologies, high-end instrumentation, technical support, and education. NRI cores enhance and expand the collaborative capabilities of research at the institute, at the North Carolina Research Campus, across the UNC-Chapel Hill campus, and throughout the worldwide research community.

NRI Research Cores

Animal Metabolism Phenotyping

Human Research

Metabolism and Metabolomics

Precision Nutrition

The Human Research Core features one of the few whole-room human calorimeters in the United States. This advanced research suite uses indirect calorimetry to evaluate a research participant's 24-hour energy intake and expenditure. The suite is equipped with a bed, treadmill, bathroom, airlock chamber for food delivery, ports for blood draws, and entertainment options. Data can be collected without interruption during meals, sleep, and light activity. The whole-room calorimeter is essential for studies on energy balance and fuel use.

MISSION: To understand how nutrition affects personal health through our leadership in precision nutrition research, finding how differences in our genes, gut bacteria, metabolism, and environment shape our individual disease risk.

VISION: To use scientific discovery to ensure optimal health through individualized nutrition.

Located in the greater Charlotte region, Kannapolis is a blossoming community, steeped in history, full of charm, and currently experiencing a remarkable renaissance in its downtown. The people who make up the NRI have wide-ranging expertise and skills—professors of nutrition, psychology, and social work and psychiatry, postdocs, laboratory technicians, doctoral students, interns, administrators, and administrative support staff—and have come to Kannapolis from all parts of the world. As diverse as this community is, they have agreed on a set of values to which they commit themselves while conducting their work in service of the NRI mission and vision: Integrity; Innovation; Collaboration; Dedication; Research Excellence; and Diversity, Equity, and Inclusion.

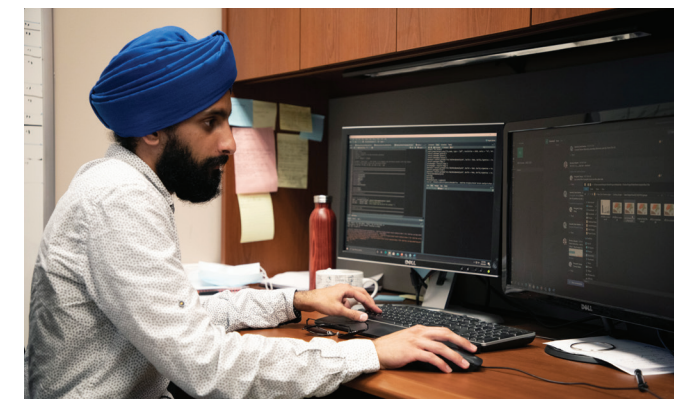
A 501(c)(3) nonprofit organization, the NRI was launched in 2008 as a primary partner of the North Carolina Research

Campus. The institute is housed in a 125,000-square-foot building featuring state-of-the-art laboratory and research spaces, clinical facilities, and offices and meeting areas.

With this advanced facility and technology, NRI research scientists are making important discoveries for worldwide health. In turn, this intellectual capital is fueling an economic engine to attract business opportunities and create new jobs for North Carolinians. The NRI is training a skilled biotechnology workforce that serves life sciences and nutrition companies located in the Piedmont.

As a nonprofit research center at UNC-Chapel Hill, part of the state university system, the NRI receives an annual state appropriation, and is additionally funded by federal and other research grants, and private donor gifts to explore new scientific ideas, recruit the world's best scientists, and provide hands-on education and mentoring of students. The NRI embraces the University's mission, which includes public service, by producing annual training workshops, symposia, and seminars for scientific researchers, and a full slate of free programming to translate the good works of the NRI for the public.

The NRI welcomes inquiries for collaborative opportunities and its service cores and encourages everyone to learn about precision nutrition in order to Eat Uniquely.



For more information, visit us online at uncnri.org



UNC NUTRITION RESEARCH INSTITUTE

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