North America Chinese Association for Nutrition

北美华人营养学会

NACAN Winter Newsletter   MARCH 2024

Dear Esteemed NACAN Members,

We are delighted to welcome you to another edition of our Winter newsletter! As we embark on a new journey in 2024 full of exciting opportunities and endeavors, our dedicated professionals at the NACAN community are committed to advancing knowledge in Nutrition Science via exploring cutting-edge research, innovative approaches, and insightful perspectives.

We are thrilled to have you join us in our mission to advance nutrition education worldwide.

In this issue, we are pleased to provide you with an overview of insightful webinars in Fall 2023. We also invite you to conduct a brief survey at the upcoming 2024 Annual Symposium. In addition, you will find exciting opportunities in the Mentor/Mentee program, volunteers, awards, and information on recent meetings and conferences. Moreover, we are excited to showcase our lifetime members' spotlight and other members' recent accomplishments.

NACAN thrives on the wealth of knowledge and expertise within its membership. As editors, we aim to foster a platform that inspires a shared passion for the science of nutrition, encourages collaboration, and promotes evidence-based practices. I encourage you to actively engage with the content, share your thoughts, and contribute to the ongoing communication that fuels our collective pursuit of excellence.

Thank you for your continued support and endeavors to the advancement of knowledge and skills. in nutrition science. Let us come together to amplify the impact of our field and continue to foster a community that cherishes both the science and art of nutrition.

Sincerely,

NACAN Newsletter Editors

Fall Webinar Recap

Webinar series 1 on November 3rd, 2023
Food Allergy and Health
Speakers: Drs. Jin Wang & Yaozhong Hu

This webinar features two experts in the field to share insights on an overview of food allergy, food technology of food desensitization, and the clinical application.

To access the recordings of presentations, please check the link and QR code below:
Food Allergy and Health Recording

Webinar series 2 on December 15th, 2023
Food is Medicine
Speakers: Drs. Fang Fang Zhang & Huicui Meng

This webinar features two experts in the field to share insights on an overview of the critical relationship between food and health and the importance of food and nutrition in sustaining health, preventing disease, treating diet-related illness, as well as improving nutrition security and food safety.

To access the recordings of presentations, please check the link and QR code below:
Food is Medicine Recording

Annual Symposium Survey

As we begin to plan our *2024 annual symposium*, we are conducting a brief survey to get your input on various aspects of the conference. Please complete this three questions survey by March 8th, 2024.

To access the survey, please click on the link below:
Member Input Needed

Mentor/Mentee Program

NACAN 2024-2025 Mentorship program is calling for applications! Please check our website below for more details. To apply, please contact doliu@vt.edu by April 7th, 2024.
2024-2025 NACAN mentorship program

The Malden Nesheim Nutrition Landscape Award from *The Journal of Nutrition*

Newly launched this year by *The Journal of Nutrition (JN)*, The **Malden Nesheim Nutrition Landscape Award** aims to recognize outstanding scholarly reviews and other works published in JN.
Read more:
News from the ASN: Introducing the Malden Nesheim Nutrition Landscape Award
Xingen Lei, PhD's Opening Editorial

Lifetime Member Spotlight

- **Dr. Lei Hao** is an assistant professor in the Department of Nursing and Allied Health at Indiana University of Pennsylvania. His research interests are focused on the prevention and intervention of chronic diseases, such as obesity and nonalcoholic fatty liver disease, through lifestyle medicine. Dr. Hao earned his PhD from The Pennsylvania State University and completed his postdoctoral training at Harvard Medical School.

Q: What inspired you to pursue a career in nutrition, and how has your journey unfolded? Could you provide an overview of your career in the field of nutrition?
Dr. Hao: My journey into the field of nutrition began during my tenure at the China CDC after completing my master's degree at Peking University. Despite not having received formal training in nutrition during medical school over 20 years ago in China, my work at the CDC exposed me to critical issues such as iron deficiency in rural children and the rising rates of childhood obesity in urban areas. Motivated by these challenges, I resolved to deepen my understanding of nutrition and its implications. With the support of UNICEF nutrition experts and leading women and child health

professionals, I pursued a Ph.D. in nutrition sciences in the United States.

Q: Could you share some of your most significant research findings or projects in the realm of nutrition?
Dr. Hao: My research focuses on combatting obesity and nonalcoholic fatty liver diseases (NAFLD). During my Ph.D., I conducted studies revealing the link between excessive simple carbohydrate intake and NAFLD development. As a postdoctoral fellow at Harvard, I investigated how omega-3 and omega-6 polyunsaturated fatty acids influence NAFLD differently. More recently, my collaborators and I have explored the efficacy of lifestyle interventions, including dietary changes, in reversing NAFLD.

Q: What challenges have you faced in your career, and how did you overcome them?
Dr. Hao: I've been fortunate to encounter few major obstacles in my career thus far. However, navigating the complexities of interdisciplinary research and staying abreast of rapidly evolving scientific knowledge have required dedication and adaptability.

Q: What advice would you give to individuals who are just starting their careers in nutrition?
Dr. Hao: In my opinion, Nutrition is a dynamic field that blends fundamental medical sciences with practical applications. For aspiring researchers, a solid foundation in both basic medical research and applied nutrition is invaluable. Pursuing both a Ph.D. and Registered Dietitian (RD) certification can provide a well-rounded education and enhance career prospects.

Q: From your perspective, what are some emerging trends or areas of interest in the field of nutrition?
Dr. Hao: It is hard to predict the future, but I believe that the future of nutrition research holds exciting prospects and challenges. Sustainable nutrition and agriculture practices are becoming increasingly prominent, necessitating innovative approaches to address global food security and environmental sustainability. Additionally, advancements in technology, such as artificial intelligence, offer promising opportunities for enhancing dietary assessment, personalized nutrition recommendations, and understanding the complex interactions between diet and health outcomes.

- **Dr. Fang Yang** is currently an associate professor of the School of Laboratory Medicine in Hubei University of Chinese Medicine. She received my Ph.D. degree in Food Science from the College of Food Science and Technology, Huazhong Agricultural University. Her research works have been focused on lipid absorption and metabolism, medicine and food homology function, and food nutritional epidemiology.

Q: What inspired you to pursue a career in nutrition, and how has your journey unfolded? Could you provide an overview of your career in the field of nutrition?
Dr. Yang: My career interest in nutrition came from a college course called "Food Nutrition".
"Food Nutrition" is a required course for undergraduate and graduate students majoring in food. It takes 'basic nutrition knowledge - food nutrition - clinical nutrition - improving human health' as the main line, and comprehensively and systematically studies the relationship among food, nutrition and human health. Since then, I have been interested in the field of nutrition, and my Ph. D project was also on nutritional effects of egg cholesterol. Later, when I joined Hubei University of Traditional Chinese Medicine, I continued my previous direction of lipid absorption and metabolism and food nutritional epidemiology. Since Hubei is a province with large resources of traditional Chinese medicine, I also began my career in the field of medicine and food homology (MFH) function. In addition to providing vital nutrients as food, MFH species also contain bioactive components that may help modulate physiological functions. Even more helpful, I teach the "food nutrition" course and use scientific research knowledge to enhance my teaching content.

Q: What advice would you give to individuals who are just starting their careers in nutrition?
**Dr. Yang:** Nutrition is closely related to biochemistry, physiology, pathology, clinical medicine, food science, agricultural science and other disciplines. First of all, I think it is very important to be familiar with the basic knowledge and research methods in these fields. Secondly, it is necessary to accumulate scientific research experience during the postgraduate periods. Based on this, young people may condense their own professional expertise, combine with the mainstream disciplines of the work unit to find their future research direction. Finally, I wish you to work hard and

actively in your own research field, balancing the relationship among performing research, advising students, and applying for projects. I also hope that you can participate in academic activities, join nutritional-related association, and make more contributions to the development of the society.

Q: From your perspective, what are some emerging trends or areas of interest in the field of nutrition?
Dr. Yang: I think precision nutrition will become a new trend in the field of nutrition in the future. Precision nutrition is also known as personalized nutrition. As the name suggests, it is characterized by the pursuit of precise personalized nutrition. First of all, we can accurately analyze individuals' genetic metabolism, physiological condition, lifestyle, and other factors using advanced detection technologies to establish a personalized health and nutrition digital profile. Then we may use cloud computing, big data, and other technological methods to merge the gathered data with nutrition omics for systematic analysis. This will help in establishing an assessment standard model to convert human health and nutrition data into a digital model of nutrition and metabolism. Finally, an individualized nutrition intervention plan will be formulated based on each person's eating patterns to achieve precision nutrition.

- **Dr. Kui Deng** is currently a postdoctoral research fellow at Vanderbilt University Medical Center. Before his current position, he received a two-year postdoctoral training at Westlake University after obtaining his Ph.D. in Epidemiology and Biostatistics from Harbin Medical University. He is interested in multi-omics research and investigating the molecular biomarkers and potential mechanisms of nutritional and lifestyle factors in their associations with cardiometabolic health based on multi-omics data and cutting-edge statistical and machine learning algorithms.
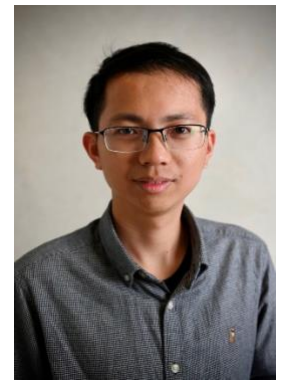
Q: What inspired you to pursue a career in nutrition, and how has your journey unfolded? Could you provide an overview of your career in the field of nutrition?
Dr. Deng: I started my career in nutrition when I joined the Precision Nutrition and Computational Medicine Lab led by Dr. Ju-Sheng Zheng at Westlake University in 2021. Before that, the main research training that I received during my PhD was in the development of biostatistics and machine learning methods for high-dimensional omics data, which sharpened my data analysis skills, enriched my research experience in omics data, and facilitated a smooth transition into human nutritional research. In Dr. Zheng's lab, I realized the importance of precision nutrition in improving human health and the role of multi-omics research in achieving precision nutrition. Through undertaking several research projects based on large-scale human cohorts, I found what I learned during my PhD could be applied to the new field of precision nutrition to improve human health in real-life settings, which greatly motivated me in research. I like working with data and I am fascinated by nutritional epidemiological research based on omics data. After my work at Westlake University, I continued my nutritional epidemiological research in Dr. Danxia Yu's group at Vanderbilt University Medical Center, as I knew that it was relatively late for me to step into the field of nutrition compared to other researchers and I needed more training. In the future, I will devote myself to nutritional epidemiological research based on multi-omics data, including microbiome and metabolome data, with the long-term goal of advancing precision nutrition.

Q: Could you share some of your most significant research findings or projects in the realm of nutrition?
Dr. Deng: In one of the projects that was under review, we identified serum proteomic and gut microbial biomarkers of the EAT-Lancet diet, which was proposed by the EAT-Lancet Commission to promote both human health and environmental sustainability. The identified biomarkers were prospectively associated with cardiometabolic diseases and risk factors. We further discovered a potential gut microbiota-blood protein interplay that may play an important role in linking the EAT-Lancet diet adherence and cardiometabolic health. This study presented key molecular evidence supporting the role of the EAT-Lancet diet in promoting cardiometabolic health.

Q: What advice would you give to individuals who are just starting their careers in nutrition?
Dr. Deng: Finding the research direction in nutrition that excites and motivates you the most.

Q: From your perspective, what are some emerging trends or areas of interest in the field of nutrition?
Dr. Deng: Precision nutrition based on systems biology approach.

- **Dr. Hao Wu** is a full professor at Department of Nutrition and Food Hygiene, School of Public Health, Cheeloo College of Medicine, Shandong University, China. He is the P.I. of Spatial Nutrition Research Team at Shandong University. He acquired M.D. and Ph.D. at Jilin University and received post-doctoral training at University of Louisville and Vanderbilt University Medical Center, USA. He proposed a novel theory named Spatial Nutrition which aims to define the impact of spatial distribution of nutritional substances in the body on health/disease, and optimize their distribution macroscopically and microscopically for better outcomes.

Q: What inspired you to pursue a career in nutrition, and how has your journey unfolded? Could you provide an overview of your career in the field of nutrition?

Dr. Wu: I was a physician majored in nephrology. During my clinical practice, I found when developed, chronic diseases were almost impossible to be cured. However, early interventions usually showed unexpected beneficial outcomes. This switched my research interest to disease prevention. Nutrition deeply affects health and disease. When pursuing my Ph.D. degree, I studied several phytochemicals that prevented complications of diabetes. This was the beginning of my career in the field of nutrition. In 2019, I joined Department of Nutrition and Food Hygiene, Shandong University School of Public Health after the accomplishment of postdoc study in Vanderbilt University Medical Center. Then I systematically researched the effects of nutritional substances on diabetes and complications, as well as the development of relative functional food products and their application in the diabetic population.

Q: Could you share some of your most significant research findings or projects in the realm of nutrition?

Dr. Wu: The most exciting highlight in my current research is the proposal of a new theory named Spatial Nutrition, which aims to define the impact of spatial distribution of nutritional substances in the body on health/disease, and optimize their distribution macroscopically and microscopically for better outcomes. I believe this theory would enrich the theoretical system of nutrition, and could open up a three-dimensional perspective for the understanding of nutrition, identifying novel dietary risk factors and molecular mechanisms of nutritional diseases, and providing optimized approaches for health promotion and disease intervention.

Q: What advice would you give to individuals who are just starting their careers in nutrition?

Dr. Wu: As a newcomer in the field of nutrition, I don't believe I am qualified to give very good suggestions for young researchers. However, as developing my own career, I find it is important to build up a distinct academic label for yourself. Such a unique label is the best introduction of your academic identity.

- **Dr. Shengmin Sang** is a Distinguished Professor of Functional Foods and Human Health at North Carolina Agricultural and Technical State University/North Carolina Research Campus. He also serves as a full faculty member within the UNC Linebergar Comprehensive Cancer Center at UNC Chapel Hill, an adjunct Professor in the Department of Food, Bioprocessing and Nutritional Sciences at North Carolina State University, and the Associate Editor of *Journal of Agricultural and Food Chemistry*, the American Chemical Society's premier journal in the field of food and agriculture.

Dr. Sang's lab specializes in researching food as medicine by identifying bioactive components from functional foods and herbal medicine, investigating their bioavailability and biotransformation in cells, animals, and humans, and exploring their beneficial effects on gut health and metabolic diseases using in vitro and in vivo models, as well as human trials. Additionally, his lab examines food biomarkers for precision nutrition through the combination of natural product chemistry, analytical chemistry, medicinal chemistry, drug metabolism, and targeted and untargeted metabolomics, aiming to identify the right food for the right population at the right time.

Q: What inspired you to pursue a career in nutrition, and how has your journey unfolded? Could you provide an overview of your career in the field of nutrition?

Dr. Sang: I was trained as a natural product chemist, specializing in the identification of bioactive natural products from traditional Chinese medicine. My research Journey continued with a postdoc position in the Department of Food

Science at Rutgers University, where I investigated bioactive compounds in functional foods as antioxidants and anti-inflammatory agents. Following this, I transitioned to the Department of Chemical Biology at Rutgers University as an Assistant Research Professor, focusing on the bioavailability, biotransformation, and preventive effects of dietary polyphenols against cancer and metabolic diseases.

In 2008, I established my own lab at the North Carolina Research Campus, dedicated to the study of food as medicine, with a primary focus on exploring the bioactive compounds in whole grains (wheat, oat, and barley), tea, ginger, apple, soy, and blueberries for gut health and metabolic disease prevention. More recently, my research has incorporated metabolomic approaches to identify food biomarkers, including the use of fecal metabolome as an indicator of an individual's dietary and health status.

Q: Could you share some of your most significant research findings or projects in the realm of nutrition?

Dr. Sang: Nutritional epidemiology research is in need of more reliable and quantitative methods for measuring dietary intake of specific foods. From the perspective of intake, there are inherent weaknesses of food frequency questionnaires and 24-hour food recall, the two major methods used in epidemiological studies to assess dietary intake. Supported by a USDA-funded R01 grant, our research has made significant strides in addressing this challenge. We have identified avenanthramides (AVAs) and their microbial metabolites as novel biomarkers of whole grain oat intake. Furthermore, our studies have revealed that the abundance of *Faecalibacterium prausnitzii* can effectively subcategorize individuals into AVA metabolizers and non-metabolizers after WG oat consumption (PMID: 33694368).

Additionally, with support from multiple USDA and NIH grants, our investigations have highlighted the potential of dietary flavonoids in targeting carbonyl stress to prevent metabolic diseases. Our findings indicate that flavonoids can be trapping reactive carbonyl species (RCS) to form RCS conjugates and activate RCS detoxification pathways (PMCID: PMC9081224, PMID: 34091674, PMID: 31665823, PMID: 31050753, PMID: 30578921). Notably, the flavonoid RCS conjugates have emerged as promising functional biomarkers of flavonoid-rich foods.

Q: *From your perspective, what are some emerging trends or areas of interest in the field of nutrition?*

Dr. Sang: Precision nutrition is an emerging trend in the field of nutrition.

Call For Volunteers

Want to get involved in NACAN but are not ready to serve on a committee yet? Come join us as a volunteer! Time is flexible and you can gain various experiences in social media, conference planning, and more! Plus networking and interacting with other nutrition professionals in the field.

If interested, please contact us at nacansymposium@outlook.com anytime!

Meeting and Conferences

Personalized Nutrition in Primary Care 2024: The Future of Nutrition in Primary Care: "Food as Medicine"
April 13, 2024. Los Angeles, CA, USA
Visit here to learn more.

2nd Annual Food is Medicine National Summit
April 24 - 25, 2024. Boston, MA, USA
Visit here to learn more.

56th Annual Meeting, The European Society for Pediatric Gastroenterology Hepatology and Nutrition
May 15 - 18, 2024. Milan, Italy
Visit here to learn more.

The 19th National Conference on Clinical Nutrition in China
May 31 - June 2, 2024. Wuhan, China
Visit here to learn more.

84th Scientific Sessions, American Diabetes Association
June 21 - 24, 2024. Orlando, FL, USA
Visit here to learn more.

NUTRITION 2024, The American Society for Nutrition's annual flagship meeting
June 29 - July 2, 2024. Chicago, USA
Visit here to learn more.

Food & Nutrition Conference & Expo® 2024
October 5 - 8,2024. Minneapolis, MN, USA
Visit here to learn more.

Share Your Accomplishments with NACAN!

Recruiting? New publications? Being recognized? Conference announcement? If you have any accomplishments or news to share, please contact us at nacanmembership@gmail.com. We will add to our next Newsletter, or other social media platform (e.g., WeChat official account 公众号, website, LinkedIn) per your request.