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USDA Food and Nutrition Service
Center for Nutrition Policy and Promotion
3101 Park Center Drive, Suite 1034
Alexandria, VA 22302

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Re: Docket No. FNS-2018-0005 for “Dietary Guidelines for Americans: Request for Comments on Topics and Questions”

Dear Sir or Madam:

The Institute of Food Technologists (IFT) is a global organization of nearly 17,000 individual members from more than 100 countries committed to advancing the science of food. Since 1939, IFT has brought together the brightest minds in food science, technology and related professions from academia, government, and industry to solve the world’s greatest food challenges. Our organization works to ensure that our members have the resources they need to learn, grow, and advance the science of food as the population and the world evolve. We believe that science is essential to ensuring a global food supply that is sustainable, safe, nutritious, and accessible to all.

IFT appreciates the opportunity to comment on the proposed Topics and Scientific Questions for the 2020-2025 Dietary Guidelines for Americans. We commend the Departments of Agriculture (USDA) and Health and Human Services (DHHS) for adopting the recommendation of the National Academies on the Dietary Guidelines process by implementing new approaches to provide the public with more transparency and opportunities to participate in the Dietary Guidelines development process.

IFT and its members believe that the dietary recommendations across the various life stages should be practical, implementable, and achievable. We believe that food science and technology are extremely important in allowing a food supply with a variety of foods that are safe, nutritious, and affordable, to help Americans meet the dietary recommendations, whether for eating patterns or specific nutrient and/or food components, throughout all life stages. Examples below describe how food science and technology can help improve the food supply through numerous choices that assist Americans in following the dietary recommendations.

- **Increasing vitamin D content in foods**
Vitamin D was identified as a nutrient of public health concern in the *2010* and the *2015-2020 Dietary Guidelines for Americans*, because the usual intake for more than 80% of the U.S. population was below the Estimated Average Requirement. There are limited food sources of naturally occurring vitamin D. Some foods and beverages, such as milk, fruit juice, and cereal are fortified with vitamin D. Technologies, such as exposure of mushrooms to Ultraviolet (UV) light, can be used to increase the level of vitamin D (D₂) by converting ergosterol to vitamin D₂. In some cases, one serving of mushrooms exposed to UV light can provide 100% of the recommended dietary allowance for vitamin D. Further, exposure to UV light does not impact the sensory attributes of mushrooms and bioavailability of vitamin D (USDA/DHHS, 2010; DHHS/USDA, 2015a; DHHS/USDA, 2015b; McHugh 2015).
- **Developing plant-based sources of omega-3 fatty acids**
Evidence shows that omega-3 fatty acids are associated with health benefits for the general population. Docosahexaenoic acid (DHA) is associated with fetal growth and development and improved infant health outcomes, such as visual and cognitive development. Developing plant-based sources of eicosapentaenoic acid and DHA through innovative technologies, such as biotechnology, could help increase availability and consumption of omega-3 fatty acids, particularly for consumers who are allergic to fish, who do not eat fish or products derived from fish, and women who are pregnant or breastfeeding. Further, plant sources of omega-3 fatty acids provide alternate options to include these fatty acids in the diets of pregnant women, women who are breastfeeding, and young children, which can help address potential concerns related to methyl mercury in fish (USDA/DHHS, 2010; Pszczola, 2012; DHHS/USDA, 2015).
- **Developing food products for the elderly**
Physical and physiological changes (e.g., changes in body composition and altered nutrient requirements), sensory impairment (e.g., decrease in sense of smell and taste), age-related issues (e.g., dementia and sarcopenia), and social determinants (e.g., reduced mobility and financial constraints) influence the food choices of older adults and hence, their ability to meet nutritional needs. Food and beverage products developed for older adults can potentially address, for example, the chemosensory aspects, such as mouthfeel, texture, and taste; nutritional needs through fortification; and redesign of food packages for convenience and easy product access, to help enhance the nutritional status and health of older adults (Baugreet, Hamill, Kerry, & McCarthy, 2017).
- **Improving the nutritional profile of fats and oils**
Advances in food science and technology, such as enzymatic interesterification, blending of different oils or fat fractions, and traditional breeding and biotechnology are being pursued to improve the nutritional profile of oils and fats. Examples include decreasing saturated fatty acid content and increasing monounsaturated (e.g., oleic acid), omega 3, and/or omega 9 fatty acid content of oils (Pszczola, 2012; Nachay, 2018).

- **Increasing nutrient content in foods**
Enrichment and fortification techniques continue to be important approaches to add essential nutrients to foods that are lost during processing (e.g., enrichment of grain products with B vitamins) or to add nutrients to achieve higher levels than are naturally-occurring in a food (fortification), to help consumers meet nutrient needs. Fortification of food and beverage products with nutrients can help reduce the risk of certain conditions, such as neural tube defects, via folate fortification, and bone loss and risk of osteoporosis, with calcium and vitamin D fortification (Institute of Food Technologists [IFT], 2010; USDA/DHHS, 2010; Fulgoni, Keast, Bailey, & Dwyer, 2011; DHHS/USDA, 2015).
- **Reducing sodium content in foods**
A variety of approaches to reduce sodium in foods are being used and pursued. These include use of herb and spice blends, mineral salts, taste enhancers, and aroma compounds; changing the structure of salt to increase the perception of saltiness; and changing the spatial distribution of salt within a product to allow a carryover effect (Buttriss, 2013; Nachay, 2015).

We strongly believe that the Dietary Guidelines deliberations should include a focus on how innovations in food science and technology can help meet dietary recommendations. Thus, we offer an additional new Topic and Question related to this for inclusion in the proposed list.

Proposed Topic and Question for consideration:

Topic: Importance of food science and technology to the food supply

Question: What is the role of food science and technology in providing a safe, nutritious, and affordable food supply, to help Americans meet the dietary recommendations during all life stages?

Knowledge of and an understanding of the current food supply, what the food supply can offer, and how or what improvements are feasible through the use of food science and technological innovations are relevant and important to discussions during the deliberation process, to assist the Dietary Guidelines Advisory Committee and the agencies with the development of practical and implementable food-based recommendations. For such knowledge sharing and discussions, expertise in food science and technology is crucial, in addition to expertise in nutrition and other disciplines.

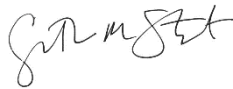
Innovations in food science and technology have led to a diversity of food choices that may encourage healthier eating patterns, in addition to meeting consumers' needs of taste, affordability, convenience, and cultural preferences. Additionally, an understanding of the available diverse food choices and potential benefits and challenges of incorporating these food products in the Federal food assistance programs and services may help increase access to more healthful foods for the recipients.

The critical insights on existing technological capabilities and limitations of the food supply and its impact on food safety, sensory appeal, cost and time constraints, and consumer acceptance would be of value in crafting dietary recommendations that are practical, implementable, and

achievable. Food scientists and technologists are an important part of solutions to help consumers follow dietary recommendations and efforts addressing food and nutrition-related public health issues, including food safety.

IFT appreciates the opportunity to provide comments on the proposed Topics and Scientific Questions for the 2020-2025 Dietary Guidelines. Our members are committed to assisting with the Dietary Guidelines process, and we believe our technological and scientific capabilities will help in developing evidence-based dietary recommendations. We thank you in advance for your consideration of our comments. Please contact Farida Mohamedshah, Director, Food Health & Nutrition, (fmohamedshah@ift.org; 202-330-4986) if IFT may provide further assistance.

Sincerely,



Cindy Stewart, PhD, CFS,
IFT President, 2017-2018



Christie Tarantino-Dean, FASAE, CAE
Chief Executive Officer

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