



Institute of Food Technologists

525 W. Van Buren St

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March 4, 2022

The Honorable Charles Schumer
Majority Leader
U.S. Senate
Washington, D.C. 20004

The Honorable Mitch McConnell
Minority Leader
U.S. Senate
Washington, D.C. 20004

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
Washington, D.C. 20004

The Honorable Kevin McCarthy
Minority Leader
U.S. House of Representatives
Washington, D.C. 20004

CC: The Honorable Members of the Senate Commerce, Science, and Transportation Committee and the House Science, Space, and Technology Committee

Dear Majority Leader Schumer, Senator McConnell, Speaker Pelosi, and Representative McCarthy,

On behalf of the Institute of Food Technologists (IFT), a U.S. domiciled, global organization of over 12,000 food professionals and technologists committed to advancing the essential science of food and its application across the global food and agricultural systems, I am writing to urge your support in coming to an agreement over S.1260: The United States Innovation and Competition Act of 2021 and H.R.4521: The America COMPETES Act of 2022. **IFT is very concerned with the chronic underfunding of food science and technology research in the United States, specifically when domestic public and private investments are compared with our foreign allies and adversaries.** While the U.S. Department of Agriculture has a role to play in funding Agriculture and Food (AgriFood) research efforts, it understandably focuses primarily on agriculture research, education, and related projects. While agriculture research is important, investment in research across the full food supply chain from farm to fork is critically needed. Food science and technology complement agriculture science and integrate the basic and applied sciences that the National Science Foundation (NSF) brings together, including biology, biotechnology, cell biology, chemistry, computer science, data informatics, engineering, genomics, materials science, microbiology, nutrition, packaging, physics, sensory science, toxicology, etc. **We urge Congress to give the NSF the specific responsibilities, as well as the tools necessary, to help promote food science & technology research projects, activities, and develop students in these STEM disciplines.**

As a result of the ongoing COVID-19 pandemic, the funding gap has left exposed areas critical to ensuring a safe, nutritious, affordable, palatable, and sustainable food supply. Bolstering research in food science and technology will ensure a secure U.S. food supply that is accessible to all Americans and their changing food needs and demands. Engaging NSF in food science & technology research across interdisciplinary science and technology territories will help improve the nation's overall health and reduce health care costs by impacting dietary choices. Investment in food science and technology research will also help to reduce foodborne disease outbreaks, assist with efforts to protect the U.S. from the effects of climate change, and enable risk resilience, enhancing national security. The United States has a unique opportunity in S.1260 and H.R.4521 to address these critical concerns; as such, IFT respectfully requests your specific attention and commitment to the following provisions:



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- We support investments in Food-Energy-Water Research provided there is a language supporting AgriFood research funding for a safe, nutritious, affordable, accessible, and sustainable food supply. Further, IFT supports language that authorizes funding for the development of scientific methods, new IoT tools (e.g., sensors) and modeling tools to assess agricultural, aquacultural, livestock, forestry, and human microbiome ecosystems and their impact on food safety, supply chain resilience and human, animal and plant health and disease.
- We support investments in Risk & Resilience Research, but would recommend addressing the broader issue of disaster prevention beyond climate change. To that end, we recommend that the focus be on addressing both natural and human driven disaster risks. In light of the COVID-19 crisis, climate change, and/or other environmental driven vulnerabilities, which have acutely exposed the vulnerabilities of the food system, we recommend incorporating the following:
 - Incorporating research on the risk related to food waste and loss across the food systems – from farm to the table and its impact on human health;
 - Incorporating further research on foodborne pathogen risks and agricultural diseases related to natural and human driven disasters (e.g., foodborne or agricultural diseases arriving from other countries); and
 - Incorporating research on the food supply chain, particularly around the use of integrated data informatics to enable advanced analysis across the system.
- We support investments in Sustainable Chemistry Research and Education, provided such research includes biochemistry, food chemistry, food engineering, and materials science, which have important applications in AgriFood systems. We further recommend renaming this section to “Sustainable Chemistry and Materials Science Research and Education.”

Examples of sustainable chemistry and materials science research include: developing new technologies to reduce AgriFood system waste and inefficiencies, developing sustainable technologies to reduce environmental impact of food packaging & food service materials, development and validation of precise, accurate and field deployable AgriFood sensors for use in both growing and processing, and understanding the interactions between structure, digestion, texture, physiology, and gut microbiome.

- We support research investments in Technology and Behavioral Science from section 10306 of the ACA bill to help better understand and reduce the impact of media on dietary consumption patterns to mitigate health related issues such as obesity, cardiovascular disease and poor nutrition across the socio-economic spectrum in support of the 2022-2026 HHS strategy proposals under their Objectives 3.1 and 3.2.
- We support funding and programs associated with Biological and Environmental Research User Facilities as it supports research in computational biology related to Climate and Earth Biosphere modeling. Specifically, IFT envisions research opportunities that could unlock understanding of stresses on the resilience of major Agricultural, Aquacultural and Food growing and delivery systems to climate change or other disruptive environmental events and mechanisms to mitigate such stresses.



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- We support the establishment of the Directorate for Science & Engineering Solutions similar to the America COMPETES Act, and we would recommend that AgriFood be represented on any Advisory Committee, as it is a critical component of both US security (food) and the economy. Additionally, we would like to see AgriFood, in particular, food science and food technology research, listed as key focus areas for the Directorate, based on the significant gaps in AgriFood research, capacity building and workforce development identified in the 2019 NASEM report “Science Breakthroughs to Advance Food and Agricultural Research by 2030”. Likewise, we support investments in Technology Research Institutes, provided AgriFood is included as a key technology area within the “planning, establishment and support of Technology Research Institutes.”
- We support the Bioeconomy Research & Development section of the America COMPETES Act, particularly where the HHS component could include the importance of Bioeconomy R&D related to the FDA’s Food Safety mandate/role, including AgriFood traceability.

IFT appreciates this opportunity to present these priorities for your consideration as your offices work diligently to put together this important piece of legislation. **The scope and mission of the National Science Foundation must be broadened to include the responsibilities and tools necessary to support interdisciplinary food science and technology research projects, activities, and the next generation of food science technologists and students within this discipline.** IFT would be pleased to offer the expertise of any academic and sector professional to Congress for the purposes of discussing the provisions highlighted within this letter and the overall funding gap. Please contact John Ruff, *Chief Science & Technology Officer*, with any questions.

Sincerely,

Christie Tarantino-Dean, FASAE, CAE
Chief Executive Officer
Institute of Food Technologists