



# NUTRITION SCIENCE

**Formulating and Activating a Global Research Agenda**



The New York  
Academy of Sciences  
*Building communities, advancing science since 1817*

## **A Global Nutrition Science Initiative**

More than three billion people are affected by malnutrition - both undernutrition and overnutrition - in developed and developing countries. It is well documented that those who have poor nutrition demonstrate cognitive development challenges, are sick more often, are more prone to diseases, are less productive, and die at a younger age compared to their nutritionally secure counterparts.

Many leading organizations are working on scaling up successful programs, providing a cost-benefit analysis around nutrition interventions, and designing cohesive advocacy approaches to make nutrition a policy priority. However, stakeholders across functional and geographic sectors agree that there is a need for a prioritized nutrition science research agenda that can be translated into application and that will support efforts to tackle global nutrition challenges across sectors and at scale.

To address this recognized need, the World Health Organization (WHO), and the New York Academy of Sciences (NYAS) are launching a Global Nutrition Science Research Initiative.

## **Proposed Activities and Deliverables to be Launched in Collaboration with WHO**

### **Introduction**

The following overview outlines activities and deliverables that WHO will implement collaboratively with NYAS and other partners to stimulate discussion and analyze the body of scientific evidence in order to develop a nutrition science research agenda.

Shaping the research agenda, and mobilizing the generation, dissemination and application of valuable knowledge is one of the core mandates of WHO. The organization also has a mandate to advise Ministries of Health on health policy issues and on program design and implementation based on best available scientific evidence.

In response to the increasing challenges in nutrition and the global effort to scale up nutrition actions, WHO approved resolution 63.23 in May 2010. Among other requests, the resolution calls “to strengthen the evidence base on effective and safe nutrition actions to counteract the public health effects of the double burden of malnutrition, and to describe good practices for successful implementation.” Understanding the role of food and nutrition in the protection and promotion of health and analyzing the behavioral and environmental determinants of people’s nutritional status require a continuous effort to generate and review knowledge, in view of the global trends in food production and distribution, the changing structure of the populations, and the dramatic changes in lifestyles.

To identify better needs and to remain current on policy and technology solutions, WHO relies on collaborations with academic networks and other knowledge-generating centers involving basic scientists, public health specialists, social scientists, health practitioners, and policy makers.

This project is expected to promote dialogue between scientists, to systematically assess knowledge in different areas of nutrition, and to develop the rationale for research priorities. The project will thus contribute to the WHO consultative process aimed at formulating a prioritized research agenda on nutrition. The broad networks of NYAS and its long standing experience in convening and fostering scientific dialogue is a valuable asset to progress in this complex agenda.

Following is an overview of the activities and deliverables that would be undertaken jointly by NYAS and WHO to further efforts to develop a nutrition science research agenda:

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## 1. Nutrition Science Research Advisory Group Selection, Identification, and Formalization

NYAS will identify, in collaboration with WHO, a core group of Nutrition Science Research Advisory Group members who can organize the discussion around nutrition research priorities. The development of strong member selection and vetting protocols will be crucial, with a specific emphasis on disciplinary and geographic diversity in accordance with initiative objectives.

To add weight to the request to potential Advisory Group members, NYAS will work to secure preliminary support from leading organizations and across priority geographies and focus areas. The Advisory Board could consist of multi-sectoral, multi-disciplinary members who also are at the front lines of nutrition research, debate, decision-making, and implementation efforts.

### **Deliverables:**

- » Identify and approach leading organizations contributing to nutrition research globally
- » Identify potential Advisory Group candidates
- » Short list and confirm Advisory Group candidates
- » Confirm working timeline for activities and meetings related to this portion of the initiative to be refined as necessary as events and activities proceed
- » Develop and deliver assignment and expectations brief to confirmed Advisory Group members

NYAS designed this global nutrition science research initiative in response to a multi-sector call for better integration of hard science into the design, execution, and support of global nutrition initiatives and interventions. In collaboration with the World Health Organization, this initiative will result in the development of a nutrition science research agenda and facilitation of a multi-sectoral action plan in response to this agenda. The 2010-2011 activities include:

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## 2. Advisory Group Working Sessions/Convening

The Nutrition Science Research Advisory Group will participate in working sessions convened physically and through electronic communication to discuss and identify topic areas where further research, programming, and/or data translation/communications support might be needed. The outcome from these working sessions/convenings will be a clear and concise document detailing the nutrition science research priorities that are most needed today, which will be acted upon through the formation of multi-sectoral Working Groups (see #3) Information generated by the Advisory Group would be subject to a consultation process to get input and feedback from many sectors, and to bring perspective to the project. ►

The Advisory Group's consensus document and rationale would be shared with scientists, international organizations, NGOs, advocacy groups, in-country organizations, donors/foundations, and government bodies, among others through multiple and varied avenues for dissemination. This research agenda also will map out next steps and articulate a "call to action" to mobilize scientists and others in the nutrition field to support the outlined priorities.

#### **Deliverables:**

- » Advisory Group kick-off conference calls and convenings
  - » Nutrition science research agenda priorities identified
  - » Consultation process activated for feedback/commentary across sectors and geographies
  - » Open-access publication and dissemination of meeting proceedings; nutrition science research agenda and relevant "calls to action" shared with external audiences as appropriate
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### **3. Nutrition Science Research Topic-Specific Working Groups**

Through outreach to leaders in the area of nutrition (including those in developing countries), relevant government agencies and policy-makers, research and academic institutions, international organizations, non-profits, and the scientific community, topic-specific working groups will be formed around priority areas as identified by the Nutrition Science Research Advisory Group. There also is an opportunity for WHO's Collaborating Centers to participate in or to join these working groups as appropriate.

The working groups will evaluate and communicate the body of evidence around a priority area and identify any additional research needed. Working groups will be responsible for identifying gaps that exist in their specified nutrition science arena, and for working with WHO and NYAS to determine program elements that align with those needs. The types of activities and deliverables will vary depending upon the nutrition science topic that is identified. Outcomes from working group efforts could include reports on needs/gaps, summary of existing science and implications, action or implementation plans, dissemination tactics, etc. The outcomes and information will be distributed to a broad range of stakeholders and nutrition/health community leaders and practitioners, including through the Scientists Without Borders platform which can be leveraged to connect and disseminate these activities and outcomes where appropriate.

#### **Deliverables:**

- » Identify working group members according to topic and confirm participation
- » Develop and deliver assignment and expectations brief to confirmed working group members
- » Working group kick-off conference calls and convenings
- » Working group action steps and outcomes identified and tracked

- » Dissemination of working group proceedings, research needs assessment, and relevant “calls to action” shared with external audiences as appropriate
- » NYAS/WHO and key stakeholder discussions on next programmatic steps to support work to date around this portion of the initiative and carry forward or modify as appropriate

In addition to activities and deliverables that will be implemented jointly by WHO and NYAS, NYAS will work to activate and operationalize the prioritized nutrition science research agenda. Following is an overview of the activities and deliverables that would be undertaken by NYAS, in collaboration with multi-sectoral partners.

## **Proposed Activities and Deliverables to be Launched by NYAS and Other Partners**

### **Implement the Nutrition Science Research Agenda and Mobilize Communities**

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#### **1. Mobilize stakeholders, organizations and other relevant audiences to implement the nutrition science research agenda and move proposed activity forward**

This effort will involve multi-sectoral outreach and mobilization around key nutrition science research topics, communicate the current body of evidence as identified during the research agenda development process, and other activities as warranted by the findings of the research agenda development process. Assets leveraged to mobilize communities include:

- » Conducting a multi-sectoral consultation process through Scientists Without Borders and WHO consultation mechanisms
  - » Designing and hosting conferences to bring together global experts who will have a role in effecting the research agenda
  - » Regularly convening Academy nutrition discussion groups on identified priorities in order to track progress against “calls to action” and to share key learnings and best practices
  - » Publishing eBriefings, specifically written to be accessible to individuals applying nutrition in the field
  - » Commissioning reviews on nutrition science research priorities for publication in annual or bi-annual volume of the Annals of the New York Academy of Sciences
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#### **2. Utilize Scientists Without Borders as an open innovation platform to stimulate research and innovation on key nutrition science research priorities**

- » Issue discrete and defined open innovation challenges that align with the research science agenda, to a worldwide, multi-sector community of scientists and related stakeholders ▶

- » Through “calls to action” and community development, facilitate the multi-sector development and implementation of innovative solutions in the challenge areas identified
  - » Connect various stakeholders and enable collaboration and ongoing knowledge transfer and capacity-building at all tiers of activity in nutrition science research and field work around the globe
  - » Facilitate the efficient matching of identified needs of nutrition stakeholders with available resources
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### **3. Leverage additional nutrition science research and explore new areas of inquiry**

This effort involves utilizing the assets, reach, and capacity of NYAS to foster multi-sector dialogue and insight, activate new work, and promote capacity development around emerging areas of nutrition science and research. The exploration of new nutrition science areas will ensure that NYAS contributions to this arena remain fresh and relevant for the long term.

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### **4. Establish nutrition science research Monitoring and Evaluation (M&E) standards working group**

This working group involves the convening of M&E and other experts to discuss a basic package of M&E elements that should be a part of the prioritized nutrition science research agenda.

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### **5. Utilize the NYAS Science Alliance to build nutrition science research capacity, including capacity building of promising nutrition science in the developing world, and encourage nutrition science research careers**

The Science Alliance is a consortium of universities, teaching hospitals, and independent research facilities committed to advancing the careers of students and postdocs in science, technology, engineering, and mathematics. The Alliance provides career advice and opportunities to network and interact with investigators across many institutions and disciplines. This network can be leveraged to elevate the profile of nutrition science research as a discipline and to connect promising young scientists with existing programs and opportunities.

#### **Participant Opportunities:**

- » Participate in a high-profile, global, multi-sectoral initiative where all partners have a voice in identifying the opportunities and challenges around nutrition science research prioritization and application
- » Participate in feedback fora for insights and comments on nutrition science research priorities prior to the finalization of the agenda
  - Includes, but is not limited to important issues around translation and multi-sector buy-in
- » Participate in discussion groups to identify and communicate sector- and specialty-specific actions steps after agenda is developed

- » Participate in addressing identified challenges and advancing the application and translation of nutrition science research findings into practical solutions through Scientists Without Borders open innovation platform and other NYAS community-building initiatives
- » Submit new and emerging nutrition science research topics of interest that warrant multi-sectoral exploration and consideration through NYAS programming assets such as discussion groups, convenings, etc.

## **About NYAS and our Collaborating Partners**

The New York Academy of Sciences has numerous key assets and strengths that enable us to successfully develop and implement this groundbreaking initiative:

- » A deep well of scientific expertise comprised of its own extensive staff of PhD scientists and its global network of top-tier scientists that collaborate with the Academy on its scientific programming and initiatives
- » A long history of creating scientific communities of interest around key areas of science, including both cutting edge and underserved areas, and a long history of keeping those communities engaged and active
- » Success in developing public/private partnerships that recognize the importance of multi-sector expertise and research to advancing scientific knowledge; this success is guided by rigorous scientific principles in constructing these partnerships and convening the appropriate “best-in-class” professionals and experts
- » Capacity to foster collaborative behavior among key stakeholders that ordinarily do not collaborate, due to NYAS’ neutral and widely-respected posture, and to convene multiple stakeholders to engender novel perspectives and insights in the area of scientific research and policy-making
- » Novel dissemination platforms that increase the number of beneficiaries of the events and initiatives it convenes and that allow it to drive the findings and outcomes of its proceedings into a wide range of communities
- » Significant global reach through its worldwide membership base and through its lead partnership in Scientists Without Borders, a Web platform that focuses global communities of scientists on solving identified scientific challenges, enables collaborative innovation and implementation around solutions, and fosters capacity-building and resource exchange
- » NYAS’ role as a neutral broker enables it to leverage in-house expertise and its history of convening a global network of best-in-class scientists

## **The New York Academy of Sciences**

Founded in 1817, the New York Academy of Sciences (NYAS) is one of the oldest scientific organizations in the United States. It is an independent 501(c) (3) nonprofit, scientific and educational organization. The Academy convenes scientists of different disciplines from around the world.

The Academy has a three-pronged mission: to advance scientific research and knowledge, support scientific literacy, and promote the resolution of society's global challenges through science-based solutions. NYAS is widely recognized as not only one of the world's foremost organizers of scientific conferences and symposia, but also as an esteemed publisher and communicator of scientific information.

Distinguished Academy members have included U.S. Presidents Thomas Jefferson and James Monroe, Charles Darwin, Louis Pasteur, John James Audobon, Thomas Edison, Margaret Mead, and Albert Einstein. The Academy has become a nexus for industry, academia, and government and its powerful programs in science, technology, medicine, and education have attracted over 25,000 members in 140 countries. This elite cadre includes – on its President's Council alone – 27 Nobel Prize Laureates and a score of industry, financial and government agency leaders from around the world.

## **World Health Organization**

The World Health Organization (WHO) is the collaborating partner to advise and support the development process of the nutrition science research agenda and corresponding action plans for the implementation of this agenda. WHO is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries, and monitoring and assessing health trends.

## **Humanitas Global Development**

Humanitas Global Development (HGD) is a strategic adviser and implementation partner to support the realization of the Global Nutrition Science Research Initiative. With headquarters in Washington, DC, HGD is an international development consultancy that works with public and private-sector organizations to create seamless, integrated, evidence-based initiatives that hold the promise of building better communities and improving lives. HGD associates design and implement comprehensive initiatives in the areas of infectious and chronic disease, food and nutrition security, gender and human rights, climate change, conflict and complex emergencies, and youth development.



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