Industry: Defining the Problem, Setting the Stage

Catherine E. Woteki, Ph.D.

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Defining the problem/Setting the stage

Who’s responsible for food safety?

What does that mean for research?

What are the current challenges?
   From a research perspective
   From a funding perspective
   From a public perception perspective

Do we need new models for food safety research?
Who’s responsible for food safety?

• Industry is responsible for safety of its products

• Government’s role is to:
  – set standards
  – verify that industry is meeting them
  – enforce when necessary
US Government Food Safety Decisions

• Inherently science based
  – Pre-market approvals
  – Naturally occurring hazards, environmental contaminants, economic adulterants

• Risk assessment assists the agencies in determining appropriate risk management response

• Risk communication occurs throughout process
US Government Food Safety Decisions

• Inherently science based
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….and the same is true in most countries
Who’s responsible for food safety?

Both *industry* and *government* –

those who produce food and those who regulate food –

share responsibilities for *food safety* and hence for *food safety research*. 
What does that mean for research?

- Government programs:
  - Monitoring/surveillance/inspection of food supply
  - Monitoring/surveillance/outbreak investigation of human illnesses
  - Risk assessment
  - Fundamental research
    - Foodborne disease processes and treatments
    - Mitigation strategies

- Industry programs:
  - Engineering
  - Pre-market safety studies
  - Priorities specific to products, processing methods, HACCP validation
  - Pre-competitive, commonly shared problems
## US Food Safety Budgets – 1998
($ in Millions)

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Industry Food Safety Research Funding
What are the current challenges?

From a research perspective
From a funding perspective
From a public perception perspective
Challenge #1 –
The breadth of the hazards

- Prevention, detection, mitigation/control/eliminate in supply chain, during processing, post-processing, in distribution, in preparation
  - Nutritional
  - Pathogens
  - Chemical contaminants
  - Radiological
  - Allergens
  - Food additives
  - Physical
  - Economic adulteration
Challenge #2 – Scope of the food system

Fresh fruits and vegetables
Meat, poultry, fish, egg, dairy products
Processed foods
Imported foods

...different matrices pose analytical challenges
...different countries of origin pose differing hazards
Challenge #3 –
No common research agenda

- No nationally coordinated research agenda
- Lack of adequate integration of research efforts among agencies
- Current funding is inadequate to support a science-based system
- National labs have not been engaged
Challenge #4 – Prevention technologies

“Front-gate” testing technologies to identify chemical contaminants, adulterants and pathogens

- Research talent and capacity exist in national labs, universities
- FDA lacks research funds, FSIS lacks research authority
- ARS and CSREES fund most food safety research
- Not a priority for NIH, NSF
- Food industry has applied “band-aids”, not mounted long-term research program
- National labs may have technologies and insights from other applications
Challenge #5 –
Public mistrust of industry research

Relationship between Funding Source and Conclusion among Nutrition-Related Scientific Articles

Lenard I. Lesser¹*, Cara B. Ebbeling¹, Merrill Goozner², David Wypij³,⁴, David S. Ludwig¹*

1 Department of Medicine, Children’s Hospital, Boston, Massachusetts, United States of America, 2 The Center for Science in the Public Interest, Washington, D. C., United States of America, 3 Department of Cardiology, Children’s Hospital, Boston, Massachusetts, United States of America, 4 Clinical Research Program, Children’s Hospital, Boston, Massachusetts, United States of America
"Despite Official Spin, Report Shows FDA Can Easily Find Experts Without Conflicts of Interest“

"Science Groups Urge Agency to Adopt Restrictions on Conflicted Experts"

"Fishing Group Funds Omega-3 Frenzy“

"Consumer, Enviro Groups Protest Nominees to EPA Acrylamide Panel”

"Groups Decry Broken Peer Review Process at EPA”

"Von Eschenbach: FDA Wants Closer Ties with Industry”

"Conflict of Interest Charges Roil Cochrane Collaboration"
Is it time for new models for food safety research?

- Common research agenda focusing on a small number of high priority issues
- Shared by
  - Regulatory agencies
  - Research agencies, including national labs
  - Companies
  - NGO’s
- Involving new funding approaches to engage
  - University, intramural government and industry scientists