

AMI Foundation News

A quarterly update on research, education and information

MAY 2010

Volume 12

Issue 2

BOARD

Van Ayvazian
Boar's Head Provisions Co., Inc.

Wesley Batista
JBS Swift & Company

Greg Benedict
American Foods Group, LLC

J. Patrick Boyle
American Meat Institute

Rod Brenneman
Seaboard Foods

Bill Buckner
Cargill, Incorporated

Philip Clemens
Clemens Family Corporation

Henry A. Davis
Greater Omaha Packing Co., Inc.

Tim Day
Bar-S Foods Co.

Jeffrey Ettinger
Hormel Foods Corporation

Neil Genshaft
Fresh Mark, Inc.

John Griffin
Griffin Industries, Inc.

Tom Hayes
Sara Lee Corporation

James H. Hodges
American Meat Institute

Gary Jacobson
Indiana Packers Corporation

Tim Klein
National Beef Packing Co., LLC

Jim Lochner
Tyson Foods, Inc.

Michael McCain
Maple Leaf Foods Inc.

Dave McDonald
OSI Industries, LLC

Nick Meriggoli
Kraft Foods, Inc./Oscar Mayer

David Miniati
Ed Miniati, Inc.

Brian Nilsson
XL Foods, Inc.

Larry Odom
Odom's Tennessee Pride Sausage
Inc.

Larry Pope
Smithfield Foods, Inc.

Dennis Vignieri
Kenosha Beef International, Ltd.

IOM Says FDA Should Set Standards for Salt Added to Processed and Prepared Foods

The Food and Drug Administration (FDA) should set new federal standards for salt added to processed and prepared foods according to a new Institute of Medicine (IOM) report unveiled recently in Washington. IOM said FDA should modify salt's generally recognized as safe (GRAS) status and set new product by product standards.

"Regulatory action is necessary because four decades of public education campaigns about the dangers of excess salt and voluntary sodium cutting efforts by the food industry have generally failed to make a dent in Americans' intakes," the committee that authored the report said.

According to Committee Chair Jane E. Henney, M.D., professor of medicine, University

of Cincinnati College of Medicine, Cincinnati, IOM is recommending a step-wise reduction approach to prevent Americans from rejecting products in which sodium is reduced too dramatically, too quickly.

IOM said that Americans consume more than 3,400 milligrams of sodium — the amount in about 1.5 teaspoons of salt — each day. The recommended maximum daily intake of sodium is 2,300 milligrams per day for adults, about 1 teaspoon of salt.

"As a substance that has been added to foods throughout history, salt has been treated as 'generally recognized as safe,' and there are no regulatory limits on its use as an additive. But studies connecting high intakes (see page 3)

U.S. Meets Objective for *E. coli* Infections

The U.S. has achieved its Healthy People 2010 objective for *Escherichia coli* O157:H7 infections, according to new data released by the Centers for Disease Control and Prevention (CDC).

The incidence of *E. coli* O157:H7 infections in Americans dropped from 1.12 cases per 100,000 people in 2008 to 0.99 cases per 100,000 people in 2009. This represents an overall 51 percent reduction since 2000. The U.S. public health goal was one case per 100,000 people and was set a decade ago. During this same time period, the number of USDA ground beef samples that tested positive for *E. coli* O157:H7 has declined by 63 percent to less than one third of one percent.

"We are gratified that our ongoing and aggressive efforts to reduce and ultimately eliminate *E. coli* O157:H7 in beef products may have contributed to the achievement of this important public health goal," said AMI Foundation President James H. Hodges.

CDC called an increase in *Listeria monocytogenes* illness from 0.29 cases per 100,000 people in 2008 to 0.34 cases per 100,000 people in 2009 "concerning," but noted that the incidence of *Listeria* infections continues to be substantially lower than at the start of the FoodNet surveillance program more than a decade ago. (see page 4)

AMIF Funds New Research Projects

Eight projects, totaling more than a quarter of a million dollars, have been approved for funding by the AMIF Board of Directors for 2010. Projects were awarded because they demonstrate a potential applicability to commercial meat and poultry processing plants and an ability to improve food safety in the meat and poultry industry. The recommendations come from the AMIF Research Advisory Committee and include:

Validation of Quaternary Ammonia for Control of *Listeria monocytogenes* in Ready-to-Eat Meat and Poultry Plants

Silliker Inc., Food Science Center

The objective of this study is to assess the effectiveness of quaternary ammonia to control the spread of *Listeria monocytogenes* in ready-to-eat (RTE) meat and poultry processing facilities.

Evaluation the Efficacy of Commonly used Antimicrobial Interventions on Shiga toxin Producing *E. coli* Serotypes O26, O103, O111, O145 and O157

(see page 2)

AMIF Advisory Committee Finalizes 2010-2011 Research Priorities

The AMI Foundation Research Advisory Committee finalized the 2010-2011 Research Priorities that will be incorporated into AMIF's annual Request for Proposals that will be released in early June. The priorities again focus on *E. coli* O157:H7 in fresh beef products, *Listeria monocytogenes* in ready-to-eat meat and poultry products, *Salmonella* in fresh and ready-to-eat meat and poultry products and other food safety concerns of interest.

This year, a priority focus section has been added for each pathogen. These focus areas highlight topics where there is an increased interest and are subsequently a higher research priority. Some of the topics include:

- Is *E. coli* O157:H7 contamination on blade tenderized and/or enhanced whole muscle beef products a potential public health concern? Enhanced whole muscle beef products

include any products that are marinated and/or have some added aqueous solution that is distributed to the internal core of the whole muscle through injection, tumbling, *etc.*

- Determine the most effective location(s) in the production chain for ground beef to apply interventions to maximize reduction of microbial contamination?
- Improve and augment epidemiological data on food attribution for listeriosis, both sporadic cases and outbreaks.
- Develop data to support future risk assessments of *Salmonella* and to estimate the human health risk attributable to beef, pork and/or poultry products.

AMI Foundation Request for Proposals, once released, can be obtained from Director of Research Susan Backus at sbackus@meatami.com

AMIF Funds Eight Projects Totaling a Quarter of a Million Dollars

(from page 1)

USDA-ARS-U.S. Meat Animal Research Center

This research project is based on limited information of how well current interventions work against non-O157 Shiga toxin producing *Escherichia coli* (STEC) in beef industry. The overall objective is to validate effectiveness of antimicrobial compound treatments on inactivation of STEC inoculated fresh beef.

Formation, Survival, and Virulence of Stress-induced Filamentous *Listeria monocytogenes*

University of Wisconsin

The proposed research is based on the hypothesis that certain stresses encountered by *Listeria monocytogenes* in the ready-to-eat (RTE) meat processing environment induce filamentation, which contributes to the pathogen's ability to survive in the food processing environment and enhances its virulence potential.

White Paper on Nutritional Benefits of Meat

University of Illinois

This white paper will compare various protein sources and review the current literature on their relationships to protein

and amino acids substrates for protein synthesis, influence cell signaling, immune function, inflammation, bone health, muscle mass homeostasis, cognitive function and glycemic regulation.

Development of an Intervention to Reduce the Likelihood of *Salmonella* Contamination in Raw Poultry Intended for use in the Manufacture of Frozen, Not Ready-to-Eat Entrees

Colorado State University

This study will evaluate newly-developed interventions that will be used on raw poultry products to reduce the risk of *Salmonella*. The overall goal is to identify antimicrobial ingredients for reducing levels of *Salmonella* contamination on raw ground chicken used in the preparation of frozen, not ready-to-eat breaded chicken strips.

White Paper on Causes of Human Methicillin-Resistant *Staphylococcus aureus* (MRSA) from All Food and Non-Food Vectors

University of Wisconsin

The objectives of this white paper are to summarize all historical data on MRSA and its relationship with animal and non-animal related infections; evaluate hospital nosocomial MRSA infections; evaluate worldwide understanding of MRSA

infections and their sources; identify the data gaps and discuss how these gaps influence the understanding of MRSA and propose tasks needed to close the gaps.

Understanding Sodium Replacements from a Food Safety and Health Risk Perspective

University of Wisconsin

The objectives of this review paper are to review the use of sodium as a food safety intervention; evaluate the synergistic effects of sodium with currently approved hurdles on food safety; identify food safety risks associated with the use of sodium alternatives; assess human health risks that may result from changes in dietary sodium and potassium; and evaluate risks of reduced sodium and sodium replacements to targeted at-risk populations.

Processed Meat Intake and Stomach Cancer

Exponent Inc.

This research will conduct a systematic literature search and perform a comprehensive meta analysis of processed meat intake and stomach cancer. The results will be submitted to a peer-reviewed scientific/medical journal.

AMIF Releases 2010 Edition of Animal Care & Handling Guidelines

The American Meat Institute (AMI) Foundation's *2010 Animal Care & Handling Guidelines and Audit Guide: A Systematic Approach to Animal Welfare*, has been released. The 120-page document is available for download on AMI's dedicated animal welfare site <http://www.animalhandling.org/>.

Authored by Colorado State University Professor of Animal Science Temple Grandin, Ph.D., with the Institute's Animal Welfare Committee, the 2010 edition includes an important new transportation audit that measures key animal welfare factors on trucks when they arrive at meat plants and as drivers and plant personnel unload livestock.

The latest edition also has been reviewed and certified by the Professional Animal Auditor Certification Organization (PAACO) and they are only the second guidelines to have received PAACO certification.

AMIF's guidelines were first developed in 1991 by Grandin. In 1997, AMI asked Grandin to create an audit program as a companion to the guidelines. Over time, the two documents were merged and today they have become a widely recognized standard for ensuring animal welfare in U.S. meat packing plants and in many countries around the world. Many retail and restaurant customers require that their meat suppliers use the AMIF audit program.

The guidelines are based upon the principle that "You manage



Temple Grandin, Ph.D.

what you measure." By objectively scoring factors like livestock vocalization, how often livestock fall, how often electric prods are used and other factors, the industry has been able to make measurable progress in the decade since the audit program was released. Today, third party audit firms provide the AMI audit and plants score themselves on a regular basis to monitor welfare indicators.

Every two years, AMI's Animal Welfare Committee reviews the guidelines and enhancements are made to the document based upon new research and data collected. In addition to the new transportation audit in the 2010 edition, the new guidelines include a helpful grid that details how to evaluate the effectiveness of various stunning methods.

"The addition of a transportation audit will help us evaluate transportation factors as they impact livestock welfare," Grandin said. "By using objective criteria to measure welfare in packing plants since 1999, measurable improvements have been achieved and I believe the new transportation component will help advance welfare even further."

Grandin's aggregated data documenting industry progress may be viewed at <http://www.grandin.com/>.

IOM Calls for Removal of Salt's GRAS Status and New Standards

(from page 1)

of sodium to high blood pressure, heart attacks, strokes, kidney disease and other debilitating and deadly conditions show that salt is safe only up to a certain amount. FDA will need to gather and assess an ample body of data to determine what limits to set on the mineral's use in processed foods and prepared meals and what the incremental decreases should be," they wrote. The committee acknowledged that establishing the process will take significant time, staffing and funding.

Salt Institute Director of Technical and Regulatory Affairs Morton Satin said Italy has one of the highest salt consumption rates in the world and one of the lowest rates of hypertension. He expressed concern about the scientific basis for the report, but Henney said the committee's job was to recommend how to implement a salt reduction initiative – not to critique the science underlying the effort.

Satin also noted that some products by their very nature are higher in salt, like parmesan cheese, which is cured in saturated salt brine for an extended period as a part of traditional processing. Given American imports of this product – and many others like it — he cautioned that if FDA pursues federal salt limits, it may prompt a World Trade Organization (WTO) case because such limits could constitute a non-tariff trade barrier. Henney noted that the committee was not tasked with considering the trade implications of the policies they recommended.

In response, AMIF Director of Scientific Affairs Betsy Booren, Ph.D., said that the IOM report ignores the complexity of the issue. According to Booren, manufacturers must carefully

weigh palatability issues, safety concerns and long-established taste preferences. "It's important to produce reduced sodium products that are both safe and acceptable," she noted.

Booren also expressed strong concern about the IOM recommendation to change salt's longstanding GRAS status. "Suggesting that salt should no longer have GRAS status sends conflicting information because salt helps make food safe. It also is essential to health, though it must be eaten in moderation," she said. Booren also noted that if GRAS status were removed, the FDA would need to embark upon a lengthy and painstaking regulatory process to set individual sodium levels for thousands of food products – a process that could take years and consume valuable resources when voluntary efforts are already under way.

The IOM report also identified three main research needs: understanding how salty taste preferences develop throughout the lifespan; developing innovative methods to reduce sodium in foods while maintaining palatability, physical properties and safety and enhancing current understanding of factors that impact consumer awareness and behavior relative to sodium reduction.

The IOM Committee was convened to review and make recommendations on a variety of methods including actions by food manufacturers, government and the public health communities to reduce dietary sodium intake to levels set by the *Dietary Guidelines for Americans*, currently 2,300 mg/day for healthy adults and 1,500 mg/day for those on salt-restricted diets.

Copies of the report "Strategies to Reduce Sodium Intake in the United States" are available at <http://www.nap.edu/>.

Eight New Videos Added to 'Ask the Meat Scientist' Series

The American Meat Institute (AMI) and the AMI Foundation have developed eight new two-minute educational videos featuring meat scientist Betsy Booren, Ph.D., director of scientific affairs of the American Meat Institute Foundation.

These eight new videos, which are being released on a weekly basis, will complement AMI's existing series, "Ask the Meat Science Guy," and will provide answers to many of the questions consumers pose about meat and poultry.

The first new video in the series, released April 20 on AMI's YouTube channel, the Meat News Network, addresses questions consumers have about sodium chloride, the most common salt used in food products.

In the video, Booren reminds consumers that fresh, unprocessed meat and poultry products like a pork chop or a steak contain very low levels of salt. But when making products like salami, hot dogs, bacon and deli meats, Booren notes, "Salt is added to reduce and prevent bacteria growth, to extend shelf life, help the product maintain a uniform texture, keep the meat moist and enhance taste and flavor."

According to an analysis by the Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES) data, only three of the top 20 sodium-contributing foods consumed by Americans are meat products or food products that contain meat.

Still, Booren acknowledges efforts to reduce sodium intake and says, "The meat industry is responding with efforts to offer a wide variety of reduced or low-sodium products to meet different nutrition needs, such as hot dogs with 250 milligrams of sodium or less and lower and very low sodium deli meats, bacon, ham and



The AMI Foundation has developed eight new videos featuring meat scientist Betsy Booren, Ph.D. The videos will provide answers to many of the questions consumers pose about meat and poultry.

breakfast sausage that are made with 140 milligrams of sodium or less."

The second installment of the series outlines the proper method to prepare hot dogs for toddlers.

In the video, Booren reminds parents and caregivers that all foods that could present a choking hazard should be sliced properly before serving. Any food shaped like a circle – from grapes to bananas to hot dogs – can pose a choking risk for young children.

"The safety of the foods we serve to our customers, especially children, is of paramount importance to the meat industry," added Janet Riley,

president, National Hot Dog and Sausage Council "That is why for more than a decade, we have echoed the American Academy of Pediatrics (AAP) recommendations that hot dogs should be cut into small pieces before serving to young children; that casings, if present, should be removed; and that parents should carefully supervise their young children's eating at all times."

The remaining videos will be released weekly, through mid-June, and address commonly held questions about meat and poultry safety, preparation and nutrition, including:

- What do the beef cuts mean and where do they come from?
- What do the pork cuts mean and where do they come from?
- Why is the ground beef I buy in the grocery store red on the outside, but sometimes brown on the inside?
- How much meat should I eat and how do I know the proper portion sizes?
- I'm trying to save money at the supermarket. How can I stretch my meat dollar?
- What does it mean to be a "lean" meat?

To watch the two-minute videos, visit the Meat News Network on YouTube at <http://www.youtube.com/MeatNewsNetwork>.

U.S. Achieves Healthy People 2010 Objective for *E. coli* O157:H7

(from page 1)

"It is noteworthy that since 2000, the *Listeria* incidence rate in ready-to-eat meat and poultry products has dropped 69 percent to less than one half of one percent. It is also noteworthy that there have been no recalls of ready-to-eat meat or poultry products triggered by a listeriosis outbreak since 2002," said Hodges. He added that there likely are other causes for the increase besides ready-to-eat meat and poultry products.

CDC also reported illnesses associated with *Campylobacter* have declined 30 percent since the baseline years of 1996-1998, but have remained flat since 2001. The rate of *Salmonella* infections remains flat as well.

"We are eager to see improved food attribution data that will definitively link foods to illnesses," Hodges said. "When we can better understand the foods that are directly linked to illnesses, we can better target our public health strategies to make our safe food supply even safer. As pleased as we are with this progress, we realize the battle is not over. We are committed to making even

further improvements."

The Foodborne Diseases Active Surveillance Network (FoodNet) is the principal foodborne disease component of CDC's Emerging Infections Program (EIP). FoodNet is a collaborative project of the CDC, the 10 state data collection sites, the USDA and the FDA. The project consists of active surveillance for foodborne diseases and related epidemiologic studies designed primarily to help public health officials better understand the epidemiology of foodborne diseases in the U.S. Illnesses related to *Campylobacter*, *Listeria*, *Salmonella*, *Shigella*, *E. coli* O157, *Vibrio* and *Yersinia* are tracked. The data is not directly tied to specific foods.

The full report, "Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food --- 10 States, 2009," appears in the *Morbidity and Mortality Weekly Report* (April 16, 2010) and is available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5914a2.html.

USDA Announces Funding Opportunities in Restructured AFRI

USDA announced that its new Agriculture and Food Research Initiative (AFRI) competitive research funding programs will focus on five areas: climate change, bioenergy, food safety, nutrition and childhood obesity and global food security. The programs will be housed under a newly restructured National Institute of Food and Agriculture (NIFA).

NIFA will be segmented into five institutes, which will be led by scientists and administrators with experience in USDA policies:

1. Institute of Food Production and Sustainability – Enhancing global food security through productive and sustainable agricultural systems.
2. Institute of Bioenergy, Climate, and Environment - Ensuring energy independence through clean, bio-based systems; ensuring sustainable and adaptive agro-ecosystems in response to climate change.
3. Institute of Food Safety and Nutrition - Ensuring a safe food supply; improving citizens' health through nutrition; reducing childhood obesity; improving food quality.
4. Institute of Youth, Family and Communities - Enabling vibrant and resilient communities; preparing the next generation of scientists; enhancing science capacity

in minority-serving institutions; enhancing youth development.

5. Center for International Programs - Leveraging the knowledge and commitment of U.S. talent to enhance the lives of those in developing countries.

Grants awarded in 2010 will be larger in size with funding up to \$25 million, and longer in duration with five-year grants awarded that are eligible, in some cases, for renewal upon achieving specific goals. NIFA expects such grants will lead to greater collaboration among institutions and organizations (including FSIS, CDC, NIH, USAID, DOE, NSF, *etc.*) and will integrate basic and applied research with deliberate education or extension programs.

Congress created NIFA through the Food, Conservation, and Energy Act of 2008. NIFA replaced the former Cooperative State Research, Education, and Extension Service (CSREES), which had existed since 1994, and is one of four USDA agencies that comprise its Research, Education, and Economics mission area. NIFA is currently led by Director Roger Beachy, Ph.D.

Additional information about the AFRI program and 2010 deadlines may be found at www.nifa.usda.gov/funding/afri/afri.html.

Elisabeth Hagen, M.D., Nominated for USDA Under Secretary for Food Safety

President Obama nominated Elisabeth Hagen, M.D., as USDA's Under Secretary for Food Safety. Hagen previously served as USDA's Chief Medical Officer and served as a senior executive at the Food Safety and Inspection Service, where she played a key role in developing and executing the agency's scientific and public health agendas.

Before joining the federal government in 2006, Hagen taught and practiced medicine in both the private and academic sectors, most recently in Washington, DC. She holds an M.D. from Harvard Medical School, and a B.S. from Saint Joseph's University. Hagen completed her specialty medical training at the University of Texas Southwestern and the University of Pennsylvania, and is board certified in infectious disease.

AMI Foundation President James H. Hodges echoed the sentiments of many industry organizations in congratulating Hagen on her appointment and expressing a strong desire to work closely with Hagen and her team to continually improve the safety of the meat and poultry supply.

"Dr. Hagen brings extensive scientific and medical expertise to the position which is vitally important in making informed decisions that are based on the best available scientific evidence," Hodges said.

Catherine Woteki, Ph.D., Nominated for USDA Under Secretary for Research, Education and Economics

President Obama nominated Catherine Woteki, Ph.D., as USDA's Under Secretary for Research, Education and Economics. Woteki served as the first Under Secretary for Food Safety at USDA, oversaw the U.S. government's Office for the Codex Alimentarius Commission and coordinated U.S. government food safety policy development and USDA's continuity of operations planning from 1997-2001.

Woteki worked for two years in the White House Office of Science and Technology Policy where she co-authored the Clinton Administration's policy statement, "Science in the National Interest," and served as the deputy under secretary for research, education and economics in the USDA. From 2002-2005, Woteki was dean of agriculture and professor of human nutrition at Iowa State University, where she also was the head of the Agriculture Experiment Station.

Since 2005, Woteki has served as global director of scientific affairs for Mars, Inc., a multinational food, confectionery, and pet care company. In this role she has managed the company's scientific policy and research on matters of health, nutrition, and food safety.

In response to the announcement, AMI Foundation President James H. Hodges said, "We look forward to working with Dr. Woteki to align USDA's research activities with the meat and poultry industry's food safety research priorities. A cooperative effort between government and industry is necessary to focus limited resources on addressing the most important issues facing the industry."

Science Soundbites

Study Examines Strains of *Lm* and Resistance to Disinfectants

A new AMIF-supported study by North Carolina State University examines the relationship of strains of *Listeria monocytogenes* and resistance to disinfectants.

Two different *cadA* cadmium resistance determinants (*cadA1*, first identified in Tn5422, and *cadA2*, associated with pLM80) were detected among cadmium-resistant *Listeria monocytogenes* strains from turkey processing plants. Prevalence of *cadA1* versus *cadA2* was serotype associated. Cadmium-resistant isolates that were also resistant to benzalkonium chloride (BC) were more likely to harbor *cadA2* alone or together with *cadA1* than isolates that were cadmium resistant but BC susceptible.

Further studies are needed to elucidate the mechanisms underlying the prevalences of the different cadmium resistance determinants and the possible role of these determinants in the ecology and evolution of *L. monocytogenes* in food processing plants and other environments.

Applied and Environmental Microbiology. (2010) 627-630.

Guidelines for Conducting Challenge Studies on Pathogen Inhibition and Inactivation Published

The National Advisory Committee on Microbiological Criteria for Foods has developed guidelines for conducting

challenge studies on pathogen inhibition and inactivation studies in a variety of foods.

The document is focused on and limited to bacterial inactivation and growth inhibition and does not make specific recommendations with respect to public health.

The Committee concludes that challenge studies should be designed considering the most current advances in methodologies, current thinking on pathogens of concern and an understanding of the product preparation, variability and storage conditions.

Studies should be completed and evaluated under the guidance of an expert microbiologist in a qualified laboratory and should include appropriate statistical design and data analyses.

The Committee provides guidelines for choice of microorganisms for studies, inoculum preparation, inoculum level, methods of inoculation, incubation temperatures and times, sampling considerations and interpreting test results. Examples of appropriately designed growth inhibition and inactivation studies are provided.

Journal of Food Protection. (2010) 73(1):140-202.

Guidelines for Randomized Control Trials Developed

An AMIF-supported meeting of biostatisticians, epidemiologists, food-safety researchers, livestock production specialists, journal editors, assistant editors and associate editors were recently convened to improve the quality of reporting and design

for research reporting of animal production, health and food-safety outcomes and other issues that are unique to livestock trials.

The group modified the CONSORT (Consolidated Standards of Reporting Trials) statement to reflect the unique aspects of reporting randomized controlled trials in livestock research.

The group developed a REFLECT (Reporting Guidelines for Randomized Control Trials) statement for livestock and food safety research that included a 22-item checklist. To describe a study's subjects, the REFLECT statement proposes new terminology that is more consistent with common usage in livestock production.

Journal of Food Protection. (2010) 73(1):132-139.

Review Emphasizes Importance of Sodium Salts

Ample research demonstrates the efficacy of sodium chloride against pathogenic and spoilage microorganisms, says a new research review by Peter Taormina, Ph.D., principal scientist with John Morrell Food Group.

In his review, Morrell examines the antimicrobial properties of sodium chloride in foods and concludes that regulatory action on sodium chloride in foods without first obtaining thorough predictions on the behavior of foodborne pathogens and spoilage organisms could lead to significant disruptions to international commerce, at best.

Critical Reviews in Food Science and Nutrition. (2010) 50:209-227.

Nutrition News Corner

New Research Review Finds Insufficient Evidence to Link Saturated Fat with Cardiovascular Disease

A new meta-analysis of existing research on the link between dietary saturated fat and the risk of heart disease and stroke has found that "there is no significant evidence for concluding that dietary saturated fat is associated with an increased risk of CHD (coronary heart disease) or CVD (cardio-vascular disease)."

The study appeared in the *American Journal of Clinical Nutrition* and was authored by researchers at the Harvard

University School of Public Health and the Children's Hospital Oakland Research Institute.

Researchers combined the relative risk rates from 21 studies that represented 347,747 people whose diets and health outcomes had been followed prospectively for 5-23 years.

This National Institutes of Health-funded meta-analysis is among the largest ever done on saturated fat and heart disease and is likely to reverberate through the research community. The researchers conclude that more research should be conducted to elucidate key findings.

To view the full paper, go to <http://www.ajcn.org/cgi/content/abstract/ajcn.2009.27725v1>.

Ongoing AMI Foundation Research

E. coli O157:H7

Investigator	Institution	Project Title
Norasak Kalchayanand, Terrance Arthur, Joseph Bosilevac, John Schmidt, Steve Shackelford, Tommy Wheeler	USDA-ARS-U.S. Meat Animal Research Center	Evaluation the Efficacy of Commonly used Antimicrobial Interventions on Shiga toxin Producing <i>E. coli</i> Serotypes O26, O103, O111, O145 and O157

Listeria monocytogenes

Investigator	Institution	Project Title
Mary Alice Smith, Joseph Frank	University of Georgia	Refinement of <i>Listeria monocytogenes</i> (<i>L. monocytogenes</i>) Low Dose Data from Pregnant Guinea Pigs for Human Risk Assessment
Kathy Glass, Jeff Sindelar	University of Wisconsin	Evaluation of anti-Listerial Properties of Natural and/or Organic Ingredients in Ready-to-Eat Meat and Poultry Products
Phil Crandall, John Marcy, Steve Ricke, Mike Johnson, Betty Martin, Corliss O'Bryan, Sara Rose Milillo	University of Arkansas	Cost Effective Treatments to Minimize In-Store Deli Meat Slicer Cross Contamination of Ready-To-Eat Meats by <i>Listeria monocytogenes</i> , Phase II
Sophia Kathariou, Dana Hanson	North Carolina State University	Genetic Attributes Associated with the Ability of Different Serotypes of <i>Listeria monocytogenes</i> to Colonize the Meat Processing Plant Environment and to Contaminate Read-to-Eat Meat Products (Chicken, Turkey, Pork and Beef)
Richard Meinersmann, Mark Berrang, Tim Hollibaugh, Joseph Frank	Agricultural Research Service, USDA, University of Georgia	Role of Protozoa in the Persistence of <i>Listeria monocytogenes</i> in a Ready-to-Eat Poultry Processing Plant
Amy Wong, Charles Kaspar, Charles Czuprynski	University of Wisconsin	Formation, Survival, and Virulence of Stress-induced Filamentous <i>Listeria monocytogenes</i>
Robin Kalinowski, Erdogan Ceylan	Silliker Inc., Food Science Center	Validation of Quaternary Ammonia for Control of <i>Listeria monocytogenes</i> in Ready-to-eat Meat and Poultry Plants

Salmonella

Investigator	Institution	Project Title
Michael Doyle, Tong Zhao	University of Georgia	Reduction of <i>E. coli</i> O157:H7 and <i>Salmonella</i> in Ground Beef
Margaret Hardin, Jayne Stratton, Marcos Sanchez-Plata	Texas A&M University, University of Nebraska-Lincoln, Inter-American Institute for the Cooperation in Agriculture	Evaluation and Performance of the Premi-Test™ <i>Salmonella</i> Serotyping System on Pork and Poultry Isolates from Commercial Sources
John Sofos, Ifigenia Geornaras, Jarret Stopforth, Dale Woerner, Keith Belk, Gary Smith	Colorado State University	Development of an Intervention to Reduce the Likelihood of <i>Salmonella</i> Contamination in Raw Poultry Intended for use in the Manufacture of Frozen, Not Ready-to-Eat Entrees

Other Food Safety

Investigator	Institution	Project Title
Randy Wehling, Michael Zeece, Harshavardhan Thippareddi	University of Nebraska	Evaluation and Analysis of Meat Products Contaminated by Low Levels of Ammonia (Targeted Research)
John Sofos, Ifigenia Geornaras, Jarret Stopforth, Dale Woerner, Keith Belk, Gary Smith	Colorado State University	Development of an Intervention to Reduce the Likelihood of <i>Salmonella</i> Contamination in Raw Poultry Intended for use in the Manufacture of Frozen, Not Ready-to-Eat Entrees

Diet and Health

Investigator	Institution	Project Title
J. Scott Smith, Terry Houser, Melvin Hunt	Kansas State University	Analysis of Heterocyclic Amines (HCAs) Formation in Various Cooked Meat Products (Targeted Research) ¹
Ellin Doyle	University of Wisconsin	Understanding Sodium Replacements from a Food Safety and Health Risk Perspective
Susan Brewer, Terry Hatch	University of Illinois	Nutritional Benefits of Meat. A White Paper
Dominik Alexander	Exponent, Inc.	Processed Meat Intake and Stomach Cancer

¹ Co-funded with the National Pork Board

GAO: FDA Could Improve Review Process of Irradiation Petitions

The Food and Drug Administration (FDA) could improve its documentation and communication of key decisions on food irradiation petitions, according to a new Government Accountability Office (GAO) report.

The GAO report was requested to determine how FDA and USDA labeling requirements for irradiated food products differ, how changes proposed by FDA to its requirements might change the amount of irradiated food sold and the extent to which FDA has effectively managed the petition review process.

The report noted that while USDA requires that any irradiation label on a USDA-inspected product be preapproved, labels on FDA-regulated products do not require preapproval, although the processor is responsible for proper labeling.

GAO also found that FDA has not met deadlines for communicating with petitioners about their petitions. GAO said that six petitions have been active and pending on average about 8.5 years and some for ten years. “While FDA is proposing changes to its labeling requirements for irradiated food that may increase the amount of food that is irradiated, it has not effectively managed its petition review process, which is the vehicle to potentially allow more food products to be irradiated,” GAO wrote.

In the report, GAO said that some industry officials believe that labeling requirements for irradiated food products “suggest to consumers that these foods are less than safe.” FDA has proposed

eliminating the labeling requirements for irradiated foods in cases when the irradiation does not cause a material change in the food—that is, when irradiation does not alter the characteristics, such as nutritional property, ordinarily found in the food—or a material change in the consequences that may result from use of the food.

“USDA officials also concurred that the proposal could change the amount of food irradiated and noted that the current labeling requirements are a deterrent to increasing the marketability and sale of these products. USDA officials told us that USDA follows FDA’s lead with issues concerning the safety of irradiated foods,” GAO wrote. “They also said any change in FDA’s labeling requirements would impact USDA because there is a goal for federal agencies to have consistent regulations. Consequently, USDA would consider modifying its own labeling requirements for irradiated foods after FDA finalizes its proposed rule. However, USDA would have to go through its own rulemaking process before making any changes.”

GAO recommended two specific actions: that FDA document its key decisions in administrative files and communicate its key decisions to its petitioners, and that for new petitions, the status of its decision making be consistent with regulatory time frames.

To read the entire report, go to: <http://www.gao.gov/cgi-bin/getrpt?GAO-10-309R>

AMIF Recognizes Plants for Worker Safety, Environmental Efforts

AMIF recognized more than 140 meat and poultry plants for outstanding safety performance its annual Conference on Worker Safety, Human Resources and the Environment, held April 29-30, at Westin Crown Center, Kansas City, Missouri.

For a complete list of this year’s winners, go to <http://www.meatami.com/ht/a/GetDocumentAction/i/59190>.

In addition, 141 plants were recognized for their environmental efforts.

For a complete list of this year’s MAPS Recognition award recipients, go to <http://www.meatami.com/ht/d/sp/i/266/pid/266>

AMIF Staff on the Move

Janet Riley, senior vice president, public affairs and member services, AMI Foundation

American Commodity Foods Distribution Association
Topic: Effective Media Strategies

Biotechnology Industry Organization (May 4)
Topic: Food Activism

Center for Food Integrity (May 11)
Topic: AMI’s Animal Welfare Programs

AMI Foundation Contacts

All AMI Foundation staff can be reached at:

1150 Connecticut Avenue, NW, 12th Floor, Washington, D.C. 20036 Phone: 202-587-4200

James H. Hodges

President
jhodges@meatami.com

Susan Backus

Director of Research
sbackus@meatami.com

Betsy Booren, Ph.D.

Director of Scientific Affairs
bbooren@meatami.com

Janet M. Riley

Senior Vice President
Public Affairs & Member Services
jriley@meatami.com

Dave Ray

Vice President, Public Affairs
dray@meatami.com

Tonya Allen

Manager, Public Affairs
tallen@meatami.com