SOT FDA Colloquia on Emerging Toxicological Science Challenges in Food and Ingredient Safety

Arsenic and Children’s Health

December 1, 2021
Welcome

Conrad Choiniere, PhD
Director, Office of Analytics and Outreach
CFSAN
US Food and Drug Administration
Colloquium Series

- Partnership of US FDA Center for Food Safety and Applied Nutrition (CFSAN) and the Society of Toxicology (SOT)
- Seventh year of colloquia series, two this year
- Stimulate a dialogue among leading toxicology experts on future-oriented toxicological science relevant to food and food ingredient safety assessment
- Are a forum to discuss the latest toxicological science in the context of food chemical safety
- Not a forum for soliciting regulatory advice or discussing food or food ingredient regulatory issues
Colloquium Series

- Open to the public via webcast at no cost
- Global audience from all employment sectors
- Recording and slides for all colloquia are available at www.toxicology.org
SOT FDA Organizing Committee

- Udayan Apte, PhD, DABT, Colloquium Series Chair, University of Kansas Medical Center, Kansas City, KS
- Stephen W. Edwards, PhD, Colloquium Series Co-chair, RTI International, Chapel Hill, NC
- Jason L. Aungst, PhD, FDA Liaison, US FDA, College Park, MD
- Omari Bandele, PhD, US FDA, College Park, MD
- Suzanne Compton Fitzpatrick, PhD, DABT, US FDA, College Park, MD
- A. Wallace Hayes, PhD, DABT, ERT, ATS, FRSB, FACFE, University of South Florida and Michigan State University, Temple Terrace, FL
- Willie McKinney, PhD, DABT, McKinney Regulatory Science Advisors, LLC, Henrico, VA
- Christine Perdan Curran, PhD, SOT Council Contact, Northern Kentucky University, Highland Heights, KY
FDA’s Action Plan for Reducing Exposure to Toxic Elements from Foods for Babies and Young Children
CYCLE OF CONTINUOUS IMPROVEMENT
A Science-Based, Iterative Approach for Decreasing Exposure to Toxic Elements from Foods

EVALUATE
The Science

PROPOSE
Draft Action Levels

FINALIZE
Action Levels

CONSULT
With Stakeholders

On-Going Monitoring, Research & Compliance
Arsenic in Rice and Rice Products
Risk Assessment Report

Center for Food Safety and Applied Nutrition
Food and Drug Administration
U.S. Department of Health and Human Services

March 2016
Version Released for Public Comment
... fetuses may have increased susceptibility to adverse health effects from maternal inorganic arsenic intake.”
...exposure to inorganic arsenic during infancy and early childhood can have neurotoxic effects, although whether these effects are lasting is unclear.”
Schedule and Speaker Introductions

Aaron Barchowsky, PhD
Colloquium Co-Chair
University of Pittsburgh
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>9:20 AM</td>
<td>Current Understanding of Mechanisms Underlying Arsenic-Induced Developmental</td>
<td>Rebecca Fry, University of North Carolina, Chapel</td>
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<td>Toxicity</td>
<td>Hill, NC</td>
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<td>10:00 AM</td>
<td>Nutritional Manipulation of One-Carbon Metabolism: Effects on Arsenic</td>
<td>Mary Gamble, Columbia University, New York, NY</td>
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<td>Methylation and Toxicity</td>
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<td>10:40 AM</td>
<td>Break</td>
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<td>Doses for Inorganic Arsenic</td>
<td>NC</td>
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<td>11:30 AM</td>
<td>Arsenic Mitigation in Foods and Ingredients</td>
<td>Cheryl Callen, Nestle USA, Arlington, VA</td>
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<td>12:10 PM</td>
<td>Summary: Brenna Flannery, US FDA, College Park, MD</td>
<td>Roundtable Discussion, Moderator: Co-chairs; all</td>
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<td>Roundtable Discussion, Moderator: Co-chairs; all speakers; Jeffrey Gift, US</td>
<td>speakers; Jeffrey Gift, US EPA, Research Triangle</td>
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<td>EPA, Research Triangle Park, NC</td>
<td>Park, NC</td>
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<tr>
<td>1:00 PM</td>
<td>Conclusion</td>
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