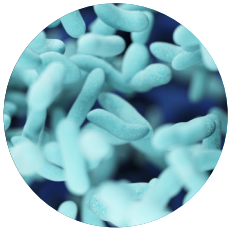


Microbiome



OUR MISSION

The committee's mission is (i) examine gut microbial-host dynamics to understand how the gut microbiome affects human health and xenobiotic toxicity and (ii) identify biomarkers from this interaction that contribute to or result from disease or organ damage.

CHAIRS

Public Chairs

Dr. Donna Mendrick (US Food and Drug Administration, National Center for Toxicological Research)
Dr. Vicki Sutherland (National Institute for Environmental Health Sciences, National Toxicology Program)

Private Chair

Ms. Donna Gulezian
(Taconic Biosciences)

HESI STAFF

Dr. Connie Chen
(cchen@hesiglobal.org)

2019 COMMITTEE HIGHLIGHTS



Participating Organizations

5 government/regulatory agencies, 4 academic/research institutes, 5 industry



Publications

1 submitted



Geographic Representation

Netherlands, United Kingdom, United States

WORKING GROUPS

The committee identified key research needs and gaps based on a committee-wide survey and held a well-received 2018 workshop that focused on microbial metabolism and biotransformation of xenobiotics, markers of toxicity and chemical adversity, effects of key factors (e.g., age) on animal models, and human susceptibility. A manuscript of proceedings from the workshop and research prioritization is in progress.

AREAS OF FOCUS FOR 2020

Proceedings from the workshop and research prioritization will be completed and published by the end of the year.

STRATEGIC IMPACT AREAS

Enhanced Efficiency and Accuracy in Safety Assessment Practice

The committee's 2018 workshop and follow-up manuscript provides directional input to stakeholders seeking to explore links between gut microbiome and changes in human health status.



Catalysis of New Science

As a result of this project, multiple HESI scientific committees (e.g., immune-safety, bioaccumulation, etc.) and other stakeholders have initiated conversations with HESI about new, expanded programmatic effort in the microbiome arena.



Increasing the Audiences for Collaborative Safety Science

This project has provided novel opportunities for scientists from basic research, pharma, consumer product, ag chem, regulatory, and clinical science sectors to understand the opportunities for and necessity of collaborating on future microbiome research initiatives.



PUBLICATION



Sutherland and McQueen et al. (2019) The gut microbiome and xenobiotics: identifying knowledge gaps.
Publication submitted and under review.

PARTICIPATING ORGANIZATIONS



Government/Regulatory Agencies

National Center for Toxicological Research, Food and Drug Administration
National Institute of Environmental Health Sciences
National Institute of Standards and Technology (Japan)
National Institutes of Health
US Food and Drug Administration, National Center for Toxicological Research

Academic/Research Institutes

Cornell University
Medical University of South Carolina
University of Arizona, Tucson
University of Connecticut, Mansfield

Industry

Corteva Agriscience
DuPont
Lexicon Pharmaceuticals
Merck & Co., Inc.
Taconic Biosciences