Workshop
Dietary Exposure Assessment
Tools for Prioritizing Food Safety Concerns

General Questions

What criteria and tools on the level of exposure to chemical or microbial hazards (and the associated uncertainties) should be used when ranking or prioritizing multiple risks and how can we assure that these tools provide information that is adequate (i.e., meets but does not exceed) for the intended risk management purpose?

Each Breakout Group will be asked to consider these questions in terms of the following scenarios:

Scenario 1 – Moderately Characterized Hazard: The hazard is one that has been relatively well characterized such that robust toxicity information or dose response information is available.

Scenario 2 – Poorly Characterized Hazard: The hazard is one for which little toxicity or dose response information is available.

Assessment approaches
What are the biologically relevant exposures? What kinds of information on the toxicology (e.g., kinetics, dynamics, mode of action) of a chemical or microbial contaminant can contribute to the design, conduct and interpretation of a dietary exposure assessment? How can these concepts be integrated into a risk ranking/prioritization process?

Residues/concentrations of chemicals in food
Considering the kinds of information on levels of contaminants that may be available along the continuum from farm to table what approaches are available for estimating exposures at the point of consumption?

Food consumption data
How do the characteristics of available food consumption information or data, such as nation-wide surveys, affect the uncertainty associated with exposure estimates? How can national food consumption surveys/databases be improved to reduce uncertainties?

Dietary intake
What tools (e.g., biomarkers, models) exist for assessing and predicting exposures to chemical or microbial contaminants in 1) the general population and 2) sensitive subpopulations?

Pattern of exposure
- What tools are available for addressing the consequences of multiple sources of exposures to the same chemical and of exposure to several chemicals with the same mode of action, target tissue, etc.? Under what circumstances do we need to consider these concepts for ranking/prioritizing risks?

- Under what circumstances do we need to consider simultaneous exposure to multiple pathogens, or to multiple strains of a single species with different pathogenicity or hardiness characteristics?

Uncertainties

- What measures of uncertainty are adequate to insure that exposure estimates are fit for purpose?
- How do you deal with differential uncertainties in a comparative way?
- How can we communicate uncertainty to the public and risk managers to increase their understanding when "enough is enough" (i.e., certainty, or confidence in the estimate)?

Knowledge gaps and research needs.

What current data gaps and critical research needs exist in order to develop criteria for ranking chemical or microbial hazards based on, or taking into account, potential exposure scenarios?