

**ABBREVIATIONS AND ACRONYMS**

| <b>Abbreviation/<br/>Acronym</b> | <b>Definition</b>   |
|----------------------------------|---|
| ARS:                             | USDA's Agricultural Research Service                              |
| CDC:                             | Centers for Disease Control and Prevention                        |
| CFSAN:                           | FDA's Center for Food Safety and Applied Nutrition                |
| CFU:                             | Colony forming unit   |
| CSFII:                           | USDA's Continuing Survey of Food Intakes by Individuals           |
| EGR:                             | Exponential Growth Rate   |
| FDA:                             | US DHHS's Food and Drug Administration                            |
| FSIS:                            | USDA's Food Safety and Inspection Service                         |
| GMP:                             | Good Manufacturing Practice                                       |
| HACCP:                           | Hazard Analysis Critical Control Point                            |
| IP:                              | Intraperitoneal   |
| LD <sub>50</sub> :               | The 50 % Lethal Dose (See Glossary)                               |
| LLO:                             | Listeriolysin O (see Glossary)                                    |
| NACMCF:                          | National Advisory Committee on Microbiological Criteria for Foods |
| NAS:                             | National Academy of Sciences                                      |
| NFS:                             | Not further specified; a term used by CSFII                       |
| NHANES III:                      | Third National Health and Nutrition Examination Survey            |
| PFGE:                            | Pulsed Field Gel Electrophoresis                                  |
| RAC:                             | The interagency Risk Assessment Consortium                        |
| RTE:                             | Ready-to-Eat  |
| SSOP:                            | Sanitation Standard Operating Procedure                           |
| UHT:                             | Ultra high temperature  |
| US DHHS:                         | United States Department of Health and Human Services             |
| USDA:                            | United States Department of Agriculture                           |
| WHO:                             | World Health Organization   |

## GLOSSARY

| Term                      | Definition   |
|---------------------------|--|
| Antibody titer:           | A measure of the activity of an antibody solution.   |
| Antibody:                 | A protein capable of specifically reacting with a particular antigen.  |
| Antigen:                  | A substance capable of eliciting the formation of an antibody.   |
| Asymptomatic:             | Without symptoms, or not exhibiting symptoms.  |
| Attack rate:              | The numbers of people at risk who develop a disease out of the total number of people at risk. The attack rate is useful in comparing the risk of disease in groups with different exposures.                                |
| Colony forming unit:      | A cell or cluster of two or more attached sister cells capable of multiplying to form a macroscopic colony of cells.   |
| Cumulative Distribution:  | A representation of a distribution where the values are arranged in ascending or descending order.   |
| Distribution:             | A series of values or a mathematical equation describing a series of values.   |
| Dose:                     | The amount or number of a pathogen that is ingested or interacts with an organism (host).  |
| Dose-response Assessment: | The determination of the relationship between the magnitude of exposure and the magnitude and/or frequency of adverse effects.   |
| Elderly:                  | U.S. population 60 years of age and older.   |
| Empirical Distribution:   | A series of observed values or data.   |
| Exposure assessment:      | A component of a risk assessment that characterizes the source and magnitude of human exposure to the pathogen.  |
| Fetus:                    | The term used to refer to an unborn child from 16 weeks after fertilization to birth.  |
| Foodborne pathogen:       | A microorganism (bacteria, virus, protozoa) that is capable of causing disease and is transmitted by food.   |
| Food Code:                | A number representing a food in the food consumption surveys; each food has its own food code.   |
| Food matrix:              | The food environment that a pathogen is in. It includes the food's fat levels, acidity, salt level and other characteristics of the food that affect the pathogen's ability to cause disease.                                |
| FoodNet:                  | Foodborne Diseases Active Surveillance Network. A surveillance system led by the Centers for Disease Control and Prevention for compiling epidemiological data on the incidences of foodborne illness (also see Appendix 3). |
| Frequency Distribution:   | A distribution describing the rate or frequency of occurrence of a value in a series or population.  |

| Term                            | Definition  |
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| Gene knock out model:           | An animal host which is specifically used because it has a known genetic defect or gene disruption in order to determine the role of the missing gene in a biological process such as resistance to infection.  |
| Intermediate-age subpopulation: | Total U.S. population excluding elderly and pregnancy-associated groups, and including susceptible populations such as cancer patients, AIDS patients, and transplant patients.   |
| Hazard health effect:           | A biological, chemical or physical agent in, or property of, food that may have an adverse health effect.   |
| Hazard identification:          | The identification of known or potential health effects associated with a particular agent.   |
| Hazard characterization:        | The qualitative or quantitative evaluation of the nature of the adverse effects associated with biological, chemical, and physical agents that may be present in food.  |
| Heat-Treated Natural Cheese:    | Natural cheese made with pasteurized milk.  |
| Incidence:                      | The number of new cases of a disease that occur during a specified period of time in a population at risk for developing the disease.   |
| Infection:                      | When a microorganism or other pathogen becomes established in the host, this includes invasion, multiplication, and transmission.   |
| Iteration:                      | A single calculation among a series of calculations (e.g. a Monte-Carlo simulation).  |
| Intraperitoneal:                | Route of introduction of an inoculum (pathogen) by a needle or syringe into the peritoneal cavity (abdomen) of the host.  |
| Intragastrical:                 | The route of introducing an inoculum in which the material is injected into the stomach of the host by a tube that bypasses the mouth and esophagus. The normal route of invasion of a foodborne pathogen is through ingestion, survival in the stomach and invasion through the gastrointestinal system. |
| Immunosuppression:              | An agent or condition that decreases a person's ability to resist infection.  |
| LD <sub>50</sub> :              | The dose resulting in 50 % lethality in a population.   |
| Listerial gastroenteritis:      | Mild, flu-like symptoms caused by <i>L. monocytogenes</i> infection.  |
| Listeriolysin O:                | A protein produced by <i>Listeria monocytogenes</i> that disrupts red blood cells in the host.  |
| Listeriosis:                    | The disease caused by infection with <i>L. monocytogenes</i> .  |

| Term                     | Definition   |
|--------------------------|--|
| Modeling (mathematical): | Attempting to predict aspects of the behavior of some system by creating an approximate (mathematical) model of it. Mathematical models contribute to the understanding of complex systems and their predicted behavior within the scope of the model.   |
| Meat or Poultry Spreads: | A ready-to-eat product that generally is cooked and contains meat or poultry, fat, and other ingredients to result in a paste-like consistency (e.g., "Ham Spread" or "Tongue Spread"). Meat or poultry spreads differ from pâté in that the primary meat product or poultry product is liver.                                       |
| Monte-Carlo Simulation:  | A process for making repeated calculations with minor variations of the same mathematical equation, usually with the use of a computer. May be used to integrate variability in the predicted results for a population or the uncertainty of a predicted result. A two dimensional Monte-Carlo in simulation may be used to do both. |
| Neonate:                 | A newborn from birth to 30 days of age.  |
| Outbreak:                | The occurrence of two or more cases of similar illness resulting from the ingestion of a common food (See Sporadic).   |
| Perinatal:               | As used in this risk assessment, refers to the susceptible population that includes fetuses and neonates from 16 weeks after fertilization to 30 days after birth.   |
| Prenatal:                | As used in this risk assessment, a fetus over 16 weeks gestation.  |
| Prevalence:              | In epidemiology, the number of affected persons present in the population at a specific point in time divided by the number of persons in the population at that time.   |
| Probability:             | As used in this risk assessment, probability denotes uncertainty. The term is also sometimes used to denote frequency.   |
| Ready-To-Eat:            | Foods that are intended to be eaten as purchased without further preparation by the consumer, particularly without additional cooking. A meat or poultry product that can be safely consumed without cooking or application of some other lethality treatment to destroy pathogens.  |

| Term                      | Definition  |
|---------------------------|---|
| Ribotype:                 | A subtype of a bacterial strain more detailed than the species or serotype level, determination of a ribotype is based on analysis of patterns formed by DNA fragments.   |
| Risk:                     | The likelihood of the occurrence and the magnitude of the consequences of exposure to a hazard on human health.   |
| Risk Analysis:            | The process consisting of three components: risk assessment, risk management, and risk communication.   |
| Risk Assessment:          | The scientific evaluation of known or potential adverse health effects resulting from human exposure to hazards. The process consists of the following steps: hazard identification, exposure assessment, hazard characterization (dose-response), and risk characterization. |
| Risk Characterization:    | Integration of hazard identification, hazard characterization and exposure assessment into an estimation of the adverse effects likely to occur in a given population, including attendant uncertainties.   |
| Serotype:                 | A group of related microbes distinguished by its composition of antigens.   |
| Serving Size:             | The amount of food eaten per eating occasion. [In this risk assessment, it does not refer to the amount customarily consumed per eating occasion, as defined by FDA in the Code of Federal Regulations.]  |
| Sporadic Case:            | When a single individual becomes ill; illness not reported in a documented outbreak.  |
| Susceptible Population:   | A group of people at increased risk for infection and illness from a pathogen, often caused by a decrease in the effectiveness of the person's immune system.   |
| Susceptibility:           | The degree that a host is vulnerable to infection, includes the ability of the host to defend itself.   |
| T lymphocytes:            | A subset of lymphocytes (white blood cells) defined by their development in the thymus gland. They are involved in most aspects of adaptive immunity including antibody production (via interaction with B-lymphocytes) and inflammation.                                     |
| Uncertainty:              | An expression of the lack of knowledge, usually given as a range or group of plausible alternatives.  |
| Uncertainty Distribution: | A description of the range of plausible values for a prediction.  |
| Variability:              | A description of differences among the individual members of a series or population.  |
| Virulence:                | The capacity of a microbial pathogen to invade and/or produce illness in the host. Mediated by the presence of specific genes and their protein products that interact with the host.   |