Both pathogenic and non-pathogenic agents, including bacteria, viruses, and molds, are capable of causing foodborne illness. Illnesses caused by foodborne pathogens are classified into three forms: foodborne infection, foodborne intoxication, and foodborne toxicoinfection. In foodborne infections, invading pathogens such as *Salmonella* sp. use multiple strategies to cross the intestinal epithelial cell barrier. When they arrive at their subcellular destinations, the pathogens multiply and induce inflammation, eliciting cellular damage that can induce gastroenteritis and diarrhea. Foodborne intoxication results from ingestion of exotoxins produced by foodborne pathogens. Consumption of foods contaminated with exotoxins induces cellular damage, fluid and electrolyte losses, or apoptosis. Most foodborne bacteria have a relatively large genome and a broad host range, along with an innate ability to adapt to changes in environmental conditions. According to an association for retail food-related businesses in Japan, a larger number of compensation payments made to each victim of foodborne illness were associated with diarrheagenic *Escherichia coli* compared with other foodborne pathogens. Among other common foodborne pathogens, *Salmonella* sp. can persist for long periods in the environment and have a wide host range, including vertebrates, arthropods, and plants. *Vibrio parahaemolyticus* is an environmental bacterium that grows at temperatures ranging from 15 – 44 °C. It has an infectious dose of approximately $2 \times 10^5$ to $3 \times 10^7$ colony-forming units and an incubation period of about 15 h. The symptoms of *V. parahaemolyticus* infection may last for 2 – 3 days. *V. parahaemolyticus* produces four hemolysins: a thermostable direct hemolysin (TDH), a heat-labile TDH-related hemolysin (TRH), and others. The TDH is heat-stable, surviving incubation at 100°C for up to 10 min.