was observed. In conclusion, the diversity observed among this set of S. Typhi strains suggests the possible involvement of surface motility and biofilm formation that might be related to virulence and pathogenesis. Motility is significant for long-term survival and persistence of S. Typhi biofilms, yet motility and biofilm formation might involve similar components at certain stages and specific conditions. These findings serve as caveats for future studies to understand the characteristics and the transmission mechanism of this pathogen.

**M05: Genetic Characterization and Diversity of *Listeria monocytogenes* Isolated from Ready-to-Eat Foods**

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The objectives of this study were to determine the prevalence and antibiotic resistance as well as to characterize *Listeria monocytogenes* isolated from ready-to-eat (RTE) foods. From November 2010 to January 2012, a total of 250 RTE food samples were purchased from street-side hawker stalls and hypermarkets in Klang Valley, Malaysia. The presumptive isolates were biochemically characterized and further confirmed by Polymerase Chain Reaction (PCR). Out of 250 samples, *Listeria* spp. was detected in 52 (20.8%) samples, out of which 32 (12.8%) were positive for *L. monocytogenes*. Out of the 32 *L. monocytogenes* isolates, 21 (40.4%) were grouped into serogroup "1/2a, 3a"; 7 (13.5%) belonged to serogroup "1/2c, 3c"; and 4 (7.7%) belonged to the serogroups "4b, 4d, 4e". All the *L. monocytogenes* harbored the *inIA, inIB, inIC* and *inIJ* virulence genes. *L. monocytogenes* showed highest resistance to Penicillin G (53%), followed by tetracycline (15.6%), amoxicillin-clavulanic acid (12.5%), vancomycin (9.4%) erythromycin (6.3%) and clindamycin / streptomycin / kanamycin / chloramphenicol (3.1%). All isolates were susceptible to gentamicin, rifampicin, clindamycin, kanamycin and vancomycin. REP-PCR and PFGE generated 30 (*D* = 0.996), and 27 (*D* = 0.988) patterns, respectively. These results indicated that *L. monocytogenes* isolates from RTE food were diverse. Since different subtyping methods often give different discriminatory powers, the usage of more than one subtyping approach is necessary in providing a more accurate picture of the clonality of *L. monocytogenes*. Furthermore, recovery of potentially pathogenic *L. monocytogenes* from RTE foods is a matter of public health concern. Therefore continued surveillance of the prevalence of *L. monocytogenes* and its emerging antibiotic resistance is needed for the recognition of foods that may pose a risk as well as to warrant the effective treatment of listeriosis.

**M06: The Application of *invA, lamB* and *toxR* Genes in Screening Bacterial Contaminants in *Anadara granosa***

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The consumption of *Anadara granosa*, or "bloody clams" is popular worldwide. This filter-feeding shellfish can accumulate enteric pathogens from polluted aquatic environments rendering them as a source of infection for food-borne diseases. Limited data are currently available in Asia, as most cases are often unreported, go unnoticed or uninvestigated. Therefore, the objective of this study was to screen for microorganisms native to estuarine waters in Selangor, for future surveillance and risk assessment efforts. A total of 450 raw *Anadara granosa* samples were screened for *E. coli, Salmonella* and *Vibrio* spp. from 15 different wet markets using microbiological, serological and molecular-based detection methods. Microbiological assessment and serological screening revealed that from the 450 samples, 27% (120/450), 30% (135/450) and 47% (210/450) of the isolates were of