

- Develop better tools to evaluate whether shellfish have been fully cooked. The acid phosphatase test has not been fully validated. A quantitative test would be a significant improvement over current organoleptic tests.
- Understanding of the ecology and pathogenicity of virulent strains of Vibrios
- Methods for detection of pathogenic Vibrios that are faster, cheaper and more sensitive
- Update risk assessments for Vp and Vv. to address regional differences, consumption patterns, dose-response, influence of local environmental conditions, etc.)
- Evaluate influence of culture methods and post harvest practices on Vibrio growth
- Compilation and collection of Vibrio strains for virulence research and describe established ranges for various strains
- Alternative PHP methods for reducing Vibrios that retain the product attributes of live shellfish
- Better screening methods (qualitative or semi-quantitative detection of toxins; field deployable, inexpensive, rapid, and easy)
- Better quantitative and confirmatory methods, (such as liquid chromatography (LC) and LC with mass spectroscopy).
- Better tools for the identification of toxin-producing algal species and a better understanding of the factors influencing toxin production and shellfish uptake / depuration dynamics. (For example, what species are producing okadaic acid, dinophysis toxins, and related toxins in regions where DSP has been detected?)
- Time required to depurate viruses?
- Tools to allow the culture of Norovirus for enumeration.
- Evaluate public health impact of contamination by birds, mammals and wildlife associated with cultured and wild shellfish.
- Evaluate public health impact of microplastics consumption
- Refine minimum dilution standards for classification around WWTP according to plant design, capacity, characteristics of receiving water basin (ie. tidal flow, retention times and flow rates)
- What are the human health impacts of contaminants of emerging concern in WWTP effluent that may be accumulated by shellfish (ie. pharmacological compounds, estrogen mimics, EU-banned detergent Oxy-clean, caffeine, insecticides, etc.)