Mass mortality of cultured Manila clam (*Ruditapes philippinarum*) in Western Europe due to Vibriosis was observed in the 1980s. The disease, called Brown Ring Disease, is caused by *Vibrio tapetis*. Two recent publications focus on the effects of this pathogen on defense factors of susceptible and non-susceptible bivalve species.

The first publication reports the use of flow cytometry to measure the in-vitro effect of *V. tapetis*, *V. splendidus*, and *V. anguillarum* on the viability and phagocytic activity of haemocytes of three bivalve species, *Ruditapes philippinarum* and two non-susceptible species *Mercenaria mercenaria* and *Crassostrea virginica*. The results demonstrated that *V. tapetis* caused greater physiological disturbance and higher mortality to haemocytes of *R. philippinarum* than to haemocytes of *M. mercenaria* and *C. virginica*.

In the second paper, the effects of challenge with 3 bacterial strains, *Vibrio tapetis*, *V. anguillarum* and an unidentified non-Vibrionaceae bacterial species, frequently isolated from apparently healthy clams, were studied on defense-related factors of *Ruditapes philippinarum*, *R. decussatus*, *M. mercenaria* and *C. virginica*. The injection of *V. tapetis* into the muscle induced a significant increase in haemocyte counts in *R. philippinarum* and *M. mercenaria*. The most significant changes in defense-related factors were systematically measured in *R. philippinarum* injected with *V. tapetis*.

These studies demonstrated a close correspondence between the deleterious effect of the three Vibrio species on the haemocytes of three marine bivalves in vitro and their reported pathogenic effects in vivo. Moreover they emphasized the high specificity of *V. tapetis* to *R. philippinarum*.

Publications:
Effects of the pathogenic *Vibrio tapetis* on defense factors of susceptible and non-susceptible bivalve species: I. Haemocyte changes following in vitro challenge. Allam-B; Ford-SE Fish and Shellfish Immunology, March 2006; 20 (3): 374-383

Effects of the pathogenic *Vibrio tapetis* on defense factors of susceptible and non-susceptible bivalve species: II. Cellular and biochemical changes following in vivo challenge. Allam-B; Paillard-C; Auffret-M; Ford-SE. Fish and Shellfish Immunology, March 2006; 20 (3): 384-397