

Vibrio Concentrations in Bottlenose Dolphins from Sapelo Island and Brunswick, GA  
Moore, JG, JW Dickerson, Jr., L Schwacke

In August, 2009, a health assessment was performed on two groups of Atlantic bottlenose dolphins (*Tursiops truncatus*). The first group of 15 dolphins was sampled from Brunswick, GA near a former industrial site where contaminants had been released into the estuarine environment. The second group of 14 dolphins was from the Sapelo Island NERRS site, which is a protected area. NOAA scientists performed a capture-release health assessment on these 29 wild dolphins to gather data on their overall health and to measure levels of different contaminants in their tissues. As part of the detailed examination, blood, nasal, gastric, urine, fecal and blowhole samples were collected for various analyses. The blowhole and fecal swabs were submitted to the Environmental Microbiology Group at CCEHBR and analyzed for total *Vibrio vulnificus* numbers and total *Vibrio parahaemolyticus* densities, along with the two virulence genes, *tdh* and *trh*, using qPCR methods.

*Vibrio vulnificus* was isolated from three animals (1 male from Brunswick and 2 males at Sapelo). *Vibrio parahaemolyticus* was present in eleven animals (5 males/2 females from Brunswick and 2 males/2 females at Sapelo). The *tdh* virulence gene in *V. parahaemolyticus* was detected in 1 female dolphin from Brunswick and 2 animals (1 male/1 female) at Sapelo (all 3 were fecal samples). The *trh* virulence gene was not detected in any dolphin swab samples. Vibrios occur ubiquitously in the warmer inshore waters during summer months, and dolphins pick them up from the water column and food chain.