

Identification and Analysis of Bacteria Associated with *Ulva* Macroalgae in Narragansett Bay

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For the last several years, a team from Salve Regina University led by Professor JD Swanson studied an important component of the Narragansett Bay ecosystem, the green macroalgae from the *Ulva* Genus, by following the bloom identity of the two species (*Ulva compressa* and *Ulva rigida*), as well as analyzing the bacterial populations associated with either species at various locations. The collected data follow the seasonal fluctuations of these organisms, which we are now correlating with multiple biotic and abiotic factors.

Here we describe the analysis of bacteria collected on *Ulva* species during the May-September blooming season of 2018 with the goal to establish correlation between excessive growth of the algae followed by increased toxicity for other species in the Bay, and the specific bacteria. We have identified 20 different bacterial colonies, and tested their resistance to various conditions, including hypoxia, presence of probiotics, and increased temperature, all addressing their survival capacity during the most excessive blooming period in July.

We hope our data will contribute to the global effort of fighting toxic algal blooms that threaten many aquatic ecosystems.