

## Poster #6

### **Utilizing the Spotted Rose Snapper (*Lutjanus guttatus*) as an Indicator of endocrine Disrupting Chemicals in the Pacific Coast of Costa Rica.**

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In an international collaboration between the Center for Bioenvironmental Research and the University of Costa Rica, the spotted rose snapper (*Lutjanus guttatus*) was investigated as a biological indicator of the presence of endocrine disrupting chemicals (EDCs) in the waters off the Pacific coast of Costa Rica. In a preliminary project in July 2003, 14 fish were sampled from the Gulf of Nicoya, Costa Rica. This gulf receives effluents from two major rivers that carry runoff from one of the largest agricultural regions in the country. Liver and gonad tissue as well as plasma samples were collected from each fish and specimen size measurements were recorded. These samples were analyzed for the presence of vitellogenin (Vtg), an estrogen-dependent protein that circulates naturally in the plasma of female fish. When EDCs are present, they are able to stimulate the estrogen receptors in male fish; resulting in the production of Vtg. Western blot data indicates that 2 out of 10 male fish showed the presence of Vtg in their plasma samples. Mature female fish were used as controls. Another collection of spotted rose snapper was made in the same location May 2004 where a total of 36 fish were sampled for the same tissues. Future analyses will involve ELISA tests to accurately determine the concentration of Vtg circulating in the plasma of fish utilized in this study from both collection years.

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