

## Poster #20

### Evidence of a Nuclear Receptor in Two Species of Scleractinian Corals

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Reproduction and development of reef-building corals are regulated by environmental signals, such as changes in light intensity, photoperiod, and temperature, but it is not known how these signals are transduced. Nuclear hormone receptors occur throughout the animal kingdom, where they act as transcriptional regulators of target genes. To identify nuclear receptors in coral tissue, we extracted total RNA from mature coral colonies of three different species. The corresponding cDNA was synthesized by reverse transcription. Then a series of degenerate primers were used to identify sequences containing a highly conserved region of the DNA binding domain. An identical 130 bp fragment was sequenced from cDNA prepared from total RNA extracted from two different species of Hawaiian scleractinian corals, *Montipora verrucosa* and *Pocillopora meandrina*. The sequence showed 98% identity over 104 base pairs with orphan receptor hCOUP-TFII. Interestingly, the corals sequence showed much lower identity over this region to a COUP-TF sequence derived from the hydra *Hydra vulgaris*. Research is in progress to determine the complete sequence of this gene, investigate expression in a variety of tissues, and identify other nuclear receptors.