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Determining the Composition of the Colony Tubes of Pterobranchs

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Poster Presentation P31

DETERMINING THE COMPOSITION OF THE COLONY TUBES OF PTEROPRANCHS

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Pterobranchs are a group of marine invertebrates within the Hemichordata. The hemichordates share characteristics with both chordates and echinoderms. Some aspects of pterobranch phylogeny are still unclear even after multiple molecular and morphological studies. Identification of any new shared characteristics with either group would be valuable information in determining clearer relationships between these groups. Pterobranchs live in colonies of secreted tubes, which are composed of a gelatinous material of unknown composition. Visually, the tubes appear similar to the tunic of tunicates, a group of invertebrates within the Chordata. The tunic of tunicates is composed of cellulose, not protein which is characteristic of marine and other animals. In this study, our goal was to determine the composition of the pterobranch dwelling tubes. We used purification methods, staining and microscopy to study the structure and properties of the tube material. To date, our results indicate that the tube material is primarily protein.