Dear Editor,

I am pleased to submit our manuscript entitled "A developmental ontology for the colonial architecture of salps" for consideration in the Biological Bulletin journal. We are open to have it considered either as a Research Paper or a Position Paper.

Our work focuses on salps, which present a unique opportunity to study the development and evolution of colonial animals. These pelagic urochordates have diverse colony architectures that have not been previously defined using a framework of variables and axes that would allow comparative analyses. In this manuscript, we present a homology-oriented ontology of the salp colony architecture design space and characterize the developmental pathways that build the different architectures.

Our findings suggest that all salp colony architectures are either final or intermediate stages within three developmental pathways towards either bipinnate, cluster, or helical forms. This framework will enable comparative studies on the biomechanical implications, ecology, and evolutionary history of the diversity of salp colony architectures. Moreover, this ontology will open new avenues for research on the adaptive evolution of colonial locomotory strategies.

We believe that our study will have a significant impact on the fields of salp biology, bio-inspired underwater robotics, and the study of modular coloniality. Additionally, our work presents a framework that will facilitate further investigations into the developmental mechanisms that underlie the diversity of colonial architectures found in other invertebrate clades.

We are confident that our manuscript will be of interest to the readership of the Biological Bulletin journal, and we look forward to hearing from you.

Thank you for your time and consideration.

Sincerely,

Alejandro Damian-Serrano, Ph.D.