



Life Sciences Seminar Series 2023 - 2024

The Intricate Dance of Coral Symbiosis: A Journey Through Partnership, Competition, and Environmental Challenges

Professor Manuel ARANDA

King Abdullah University of Science and Technology
Biological and Environmental Science and
Engineering Division



May 6, 2024 (Monday)



11:00 am - 12:00 nn



L3, Science Centre, CUHK Campus

Brief biography

Dr. Aranda is a Professor of Marine Sciences at the King Abdullah University of Science and Technology in Thuwal, Saudi Arabia. He earned his Ph.D. in 2006, focusing on the evolution of gene regulatory networks in insects. Over the years, he has pivoted his research toward the fascinating world of coral reefs, blending his background in molecular biology, evolutionary genetics, and genomics.

He is deeply committed to understanding the complex symbiotic relationship between corals and their dinoflagellate endosymbionts. Together, these organisms constitute the key players in one of the Earth's most biodiverse ecosystems. Through cutting-edge functional genomics and genetic approaches, Dr. Aranda and his team delve into questions surrounding how this relationship works, how they originated and why they are so successful in the nutrient-poor environments of tropical oceans. They employ -omics approaches combined with experimental validation to uncover the molecular mechanisms and evolutionary history of these symbiotic associations, shedding light on the delicate balance that allows corals to flourish in nutrient-poor waters.

Aranda's work is particularly timely, given the threats posed by climate change to these fragile ecosystems. His research goes beyond just understanding the evolutionary intricacies and also delves into epigenetic mechanisms such as, DNA methylation and histone modifications, providing vital clues for coral reef restoration and resilience.