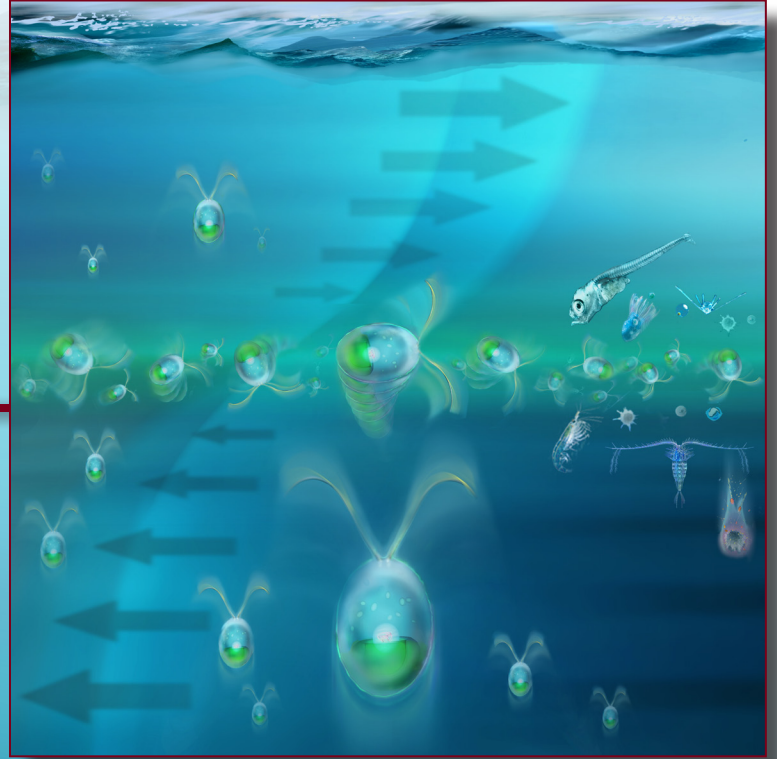


SAFL SEMINAR SERIES

WEDNESDAY, OCTOBER 5, 2011, 3:30PM
ST. ANTHONY FALLS LABORATORY ~ AUDITORIUM

Marine Microfluidics: Chemotaxis and Gyrotaxis in the Ocean

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Abstract:

It is now widely recognized that microbial activities represent one of the main forces shaping biogeochemistry and productivity in the ocean. At the level of individual microbes, the ocean is a sea of gradients. Chemical gradients define heterogeneous resource landscapes, while flow gradients exert forces and torques on organisms. Our understanding of these interactions - both chemical and fluid mechanical - has been hampered by the difficulty of studying microbial behavior at appropriate spatiotemporal scales. Modern microfluidic and millifluidic tools afford unprecedented access to this microscale world. I will show how these approaches can help shed light on microbial behavior in both resource gradients (chemotaxis) and flow gradients (gyrotaxis).