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Department of Marine Sciences
Presents a Seminar By

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“Benthic Ecology” across scales: From nanometers to decameters, from days to eons

Understanding ecosystem functioning in deep time and searching for life beyond Earth is not a trivial task. Little geobiological evidence remains from the Precambrian and rock-return missions from nearby and distant planets are costly and thus continuously postponed. Assuming we know what life is, biosignatures, such as metabolic gases and mineral precipitates, may help interpreting the scarce relict evidence, notably from the Archean or Proterozoic. Biosignatures from aquatic ecosystems may offer insights for understanding Martian sediments or plumes from Enceladus' geysers. Laminated benthic organosedimentary structures, or microbial mats, are often largely devoid of eukaryotes and have been used as analogs for early Earth's ecosystems. Mechanisms of biogenic mineral precipitation and early diagenetic alteration in these systems are relatively well understood. This has helped us to interpret ancient rocks and propose that not cycling of iron, but that of arsenic supported early life on Earth. The next generation Martian rover will therefore lack Mössbauer spectroscopic devices but use micro-XRF instead.

Host: Penny Vlahos

Time & Date: 11:00 am, Friday, March 3, 2017

Place: Marine Sciences Building, Seminar Room 103

Please see this [page](#) for cancelations and additional seminar information, email marinesciencesseminars@uconn.edu, or call 860-405-9152 or 860-405-9151