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Sommario/riassunto

Igneous oceanic crust is one of the largest potential habitats for life on earth, and microbial activity supported by rock-water-microbe reactions in this environment can impact global biogeochemical cycles. However, our understanding of the microbiology of this system, especially the subsurface "deep biosphere" component of it, has traditionally been limited by sample availability and quality. Over the past decade, several major international programs (such as the Center for Dark Energy Biosphere Investigations, the current International Ocean Discovery Program and its predecessor Integrated Ocean Drilling Program, and the Deep Carbon Observatory) have focused on advancing our understanding of life in this cryptic, yet globally relevant, biosphere. Additionally, many field and laboratory research programs are examining hydrothermal vent systems -a seafloor expression of seawater that has been thermally and chemically altered in subseafloor crust - and the microbial communities supported by these mineral-rich fluids. The Frontiers in Microbiology 3 September 2017 | Recent Advances in Geomicrobiology of the Ocean Crust papers in this special issue bring together recent discoveries of microbial presence, diversity and activity in these dynamic ocean environments. Cumulatively, the articles in this special issue serve as a tribute to the late Dr. Katrina J. Edwards, who was a pioneer and profound champion of studying microbes that "rust the crust". This special issue volume serves as a foundation for the continued exploration of the subsurface ocean crust

deep biosphere.