Microbial life in deep subsurface environments:
The role of high pressure in biogeochemical cycles

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"Ocean worlds" are defined as planetary bodies with a current liquid ocean. This includes planet Earth, as well as icy moons of the outer solar system: Saturn's moon Titan and Jupiter's moons Ganymede and Europa. While microbial life is found on Earth in the deepest parts of the ocean and in the subseafloor, oceans on icy moons represent targets of future NASA and ESA missions to look for potential life. Pressure increases as a function of depth in ocean worlds, however, the range of pressures encountered in icy moons' oceans is much larger than in Earth's ocean. On Earth, pressure is known to affect the physiology and metabolism of microorganisms. **In this project, we investigated the effects of high hydrostatic pressure on the physiology and metabolic activity of the sulfate-reducing bacterium *Desulfovibrio hydrothermalis* (*Dh*) AM13.** We present 1) our method to grow anaerobic bacteria under high pressure, and 2) our results of growth, survival and sulfate reduction in short-term incubations.