LOWER PROKARYOTIC LEUCINE INCORPORATION RATES UNDER *IN SITU* PRESSURE THAN UNDER DECOMPRESSED CONDITIONS IN THE DEEP NORTH ATLANTIC

Prokaryotic activity and community composition is highly depth-stratified in the oceanic water column reflecting the increasing recalcitrance of dissolved organic matter and decreasing temperature with depth. The role of increasing hydrostatic pressure in controlling deep ocean microbial activity is less well-studied. To determine the influence in hydrostatic pressure on heterotrophic microbial activity, an *in situ* incubator was deployed in the North Atlantic Ocean at a depth between 500 to 2000 m. The *in situ* incubator was programmed to collect and incubate prokaryotes under the water after adding ^{3}H-leucine and to fix a certain volume of the incubated samples at specific time intervals (3 to 10 h depending on the depth). Prokaryotic leucine incorporation obtained under *in situ* pressure conditions was generally lower than that on decompressed samples incubated on board. Ratios of *in situ* prokaryotic leucine incorporation to decompressed conditions decreased with increasing depth. Our results suggest that bulk heterotrophic prokaryotic production in the deep sea might be lower than expected.