Genome Sequence of the Psychrophilic Deep-Sea Bacterium *Moritella marina* MP-1 (ATCC 15381)

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*Moritella marina* MP-1 is a bacterial species known for its production of docosahexaenoic acid. We present the draft genome sequence of the type strain *Moritella marina* MP-1 (ATCC 15381), having 4,636,778 bp with a G+C content of 40.5% and consisting of 83 contigs.

Polyunsaturated fatty acids (PUFA), such as docosahexaenoic acid [DHA, 22:6(n-3)], have beneficial effects on human health through their effect on membrane fluidity and contribute to many aspects of health (6, 7, 13, 15). Twenty-five years ago, a marine bacterium originally designated *Vibrio marinus* (3) and later renamed *Moritella marina* MP-1 (14) was reported to produce high levels of DHA (18% of the total fatty acids) (4). Such high levels of DHA presumably provide this bacterium with the ability to maintain appropriate membrane fluidity in the low temperatures and high pressures of its marine environment. Indeed, it has been proposed that such marine microbes are the source of omega-3 fatty acids in the marine food web (10). A comparison of marine bacteria showed that MP-1 produced more than twice as much DHA as 9 other species (9). The PUFA biosynthesis pathway used by marine bacteria, such as MP-1, is distinct from the plant and microalgal pathways (5, 8, 10).

MP-1 is a Gram-negative facultative anaerobe with curved or straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows in straight rods that is motile by polar flagella, convex, opaque, cream colored, a halophile, and nonpigmented and that grows.

There is no genome sequence yet available for MP-1 in the Genome OnLine Database (GOLD) (11). Only 84 proteins and 79 nucleotide sequences were reported in NCBI (12) or characterized in GenBank under the accession number ALOE00000000.

The availability of the genome sequence of *Moritella marina* MP-1 will allow deeper comparative genomic studies and track the potential pathway involved in long-chain polyunsaturated fatty acids by the polyketide pathway.

**Nucleotide sequence accession number.** The whole-genome draft sequence of *Moritella marina* MP-1 has been deposited in GenBank under the accession number ALOE00000000.

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