

Table S1. Phenotypic and biochemical characteristics of cypermethrin-degrading and biosurfactant-producing bacterial strains isolated from Northern Chilean Patagonia.

| Strain | MS1 | MS4 | MS8 | MS10 | MS11 | MS12 | MS13* | MS14 | MS15a** | MS16** | MS19** |
|-------------------------------------|-------|---------|-----|------|---------|---------|-------|------|---------|---------|---------|
| Gram stain | + | - | - | - | + | + | + | + | - | + | - |
| Cell morphology | cocci | bacilli | rod | rod | bacilli | bacilli | rod | rod | bacilli | bacilli | bacilli |
| Motility | - | + | + | + | - | - | - | - | + | - | + |
| Catalase | + | + | + | + | + | + | + | + | + | + | + |
| Cypermethrin* growth | | | | | | | | | | | |
| 50 mg L ⁻¹ (OD600 nm) | + | + | + | + | + | + | +++ | + | +++ | +++ | +++ |
| E ₂₄ (%)* | 12 | 94 | 76 | 32 | 24 | 82 | 77 | 38 | 60 | 79 | 71 |

* Cells grown on TSA at 28 °C for 24 h.

** strains selected for genomic analysis.

Table S2. Identification by comparative sequence analyses of cypermethrin-degrading and biosurfactant-producing bacterial strains isolated from Northern Chilean Patagonia.

| Strain | Accession number | Closest type strain (Accession N°) | Score (% Identity) |
|--------|------------------|---|--------------------|
| MS1 | MK271075 | <i>Rhodococcus erythropolis</i> ATCC 4277 (AY281111.1) | 435/436 (98) |
| MS4 | MK271077 | <i>Serratia odorifera</i> DSM 4582 (NR_114578.1) | 702/730 (96) |

| | | | |
|------|----------|---|--------------|
| MS8 | MK271079 | <i>Pseudomonas oryzihabitans</i> LMG7040 (NR_117269.1) | 729/733 (99) |
| MS10 | MK271080 | <i>Pseudomonas</i> sp. DSM 12280 (AM088476.1) | 700/740 (95) |
| MS11 | MK271081 | <i>Rhodococcus globerulus</i> DSM 43954 (NR_026184.1) | 716/718 (99) |
| MS12 | MK271082 | <i>Rhodococcus globerulus</i> DSM 43954 (NR_026184.1) | 707/709 (99) |
| MS13 | MK271083 | <i>Rhodococcus</i> sp. DSM43943 (X80616.1) | 702/720 (98) |
| MS14 | MK271084 | <i>Rhodococcus</i> sp. DSM43943 (X80616.1) | 696/713 (98) |
| MS15 | MK271085 | <i>Pseudomonas</i> sp. DSM 12280 (AM088476.1) | 703/742 (95) |
| MS16 | MK271086 | <i>Rhodococcus globerula</i> DSM 43954 (NR_026184.1) | 704/706 (99) |
| MS19 | MK271087 | <i>Pseudomonas marincola</i> KMM 3042 (NR_041592.1) | 707/711 (99) |

M.S.: Marine Sediment