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Figure S1. Maximum-likelihood (A) and minimum-evolution (B) trees were constructed based on 16S rRNA gene sequences, showing the relationship between strain PT-20 and related taxa. Bootstrap values (%) were based on 1000 replicates and were shown for branches. Bar, 0.005 expected changes per site.



Figure S2. Scanning electron micrograph of cells of strain PT-20. Bar, 1 µm; magnification,

×15000.



Figure S3. (**A/B/C/D**): The effects of adding glycine betaine on phenol degradation and cell growth with different initial phenol concentration, the medium used for phenol degradation was TSB medium supplemented with 10% NaCl. (**E/F**): The effects of adding glycine betaine on phenol degradation and cell growth under different NaCl concentrations, the medium used was TSB medium supplemented with 1000 mg/L phenol and different concentration of NaCl. All measures were performed in triplicate. P: Phenol; GB: Glycine Betaine.