

Limnobacter parvuscolonica sp. nov., thiosulfate-oxidizing bacterium isolated from lake water

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Subject category: New Taxa of *Burkholderiaceae*,

Running Title: *Limnobacter parvuscolonica* sp. nov.,

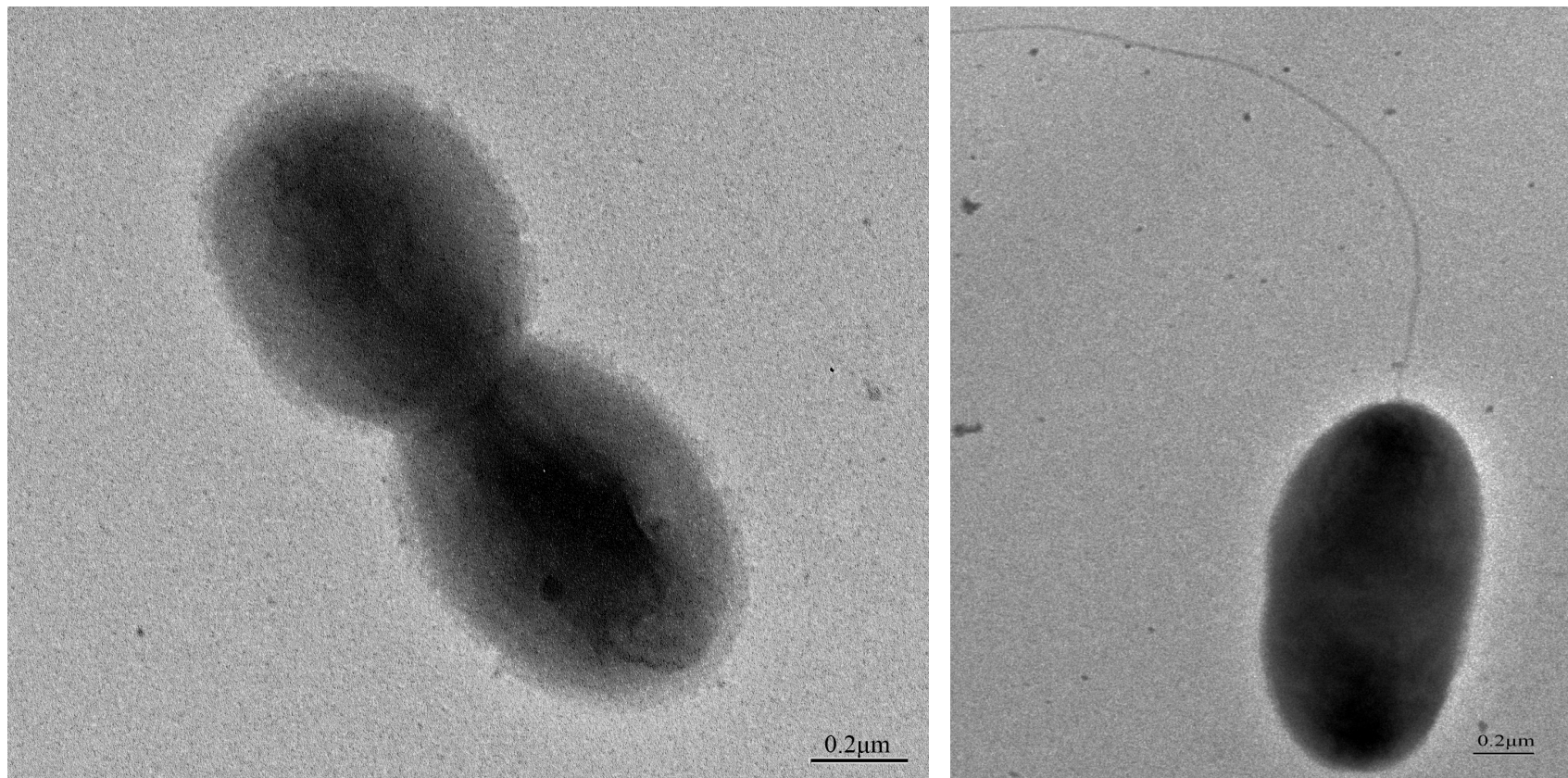


Fig S1. Transmission electron micrographs showing the cell morphology of strain YS8-69^T; Bars, 0.2 μm;

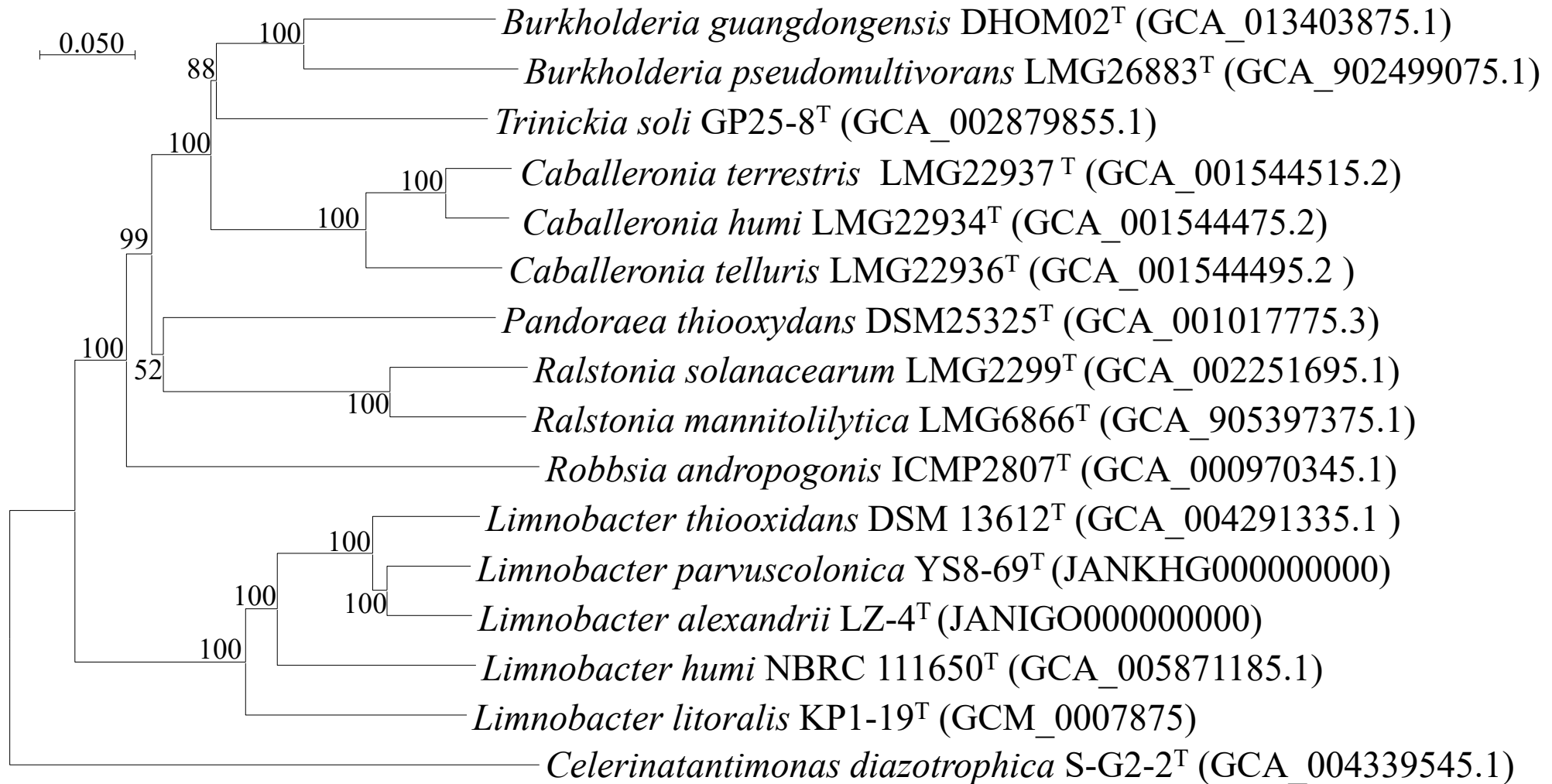


Fig S2. Tree inferred with FastME 2.1.6.1 from whole-proteome-based GBDP distances. The branch lengths are scaled via GBDP distance formula d_5 . Branch values are GBDP pseudo-bootstrap support values > 60 % from 100 replications, with an average branch support of 95.3 %. The tree was midpoint-rooted.

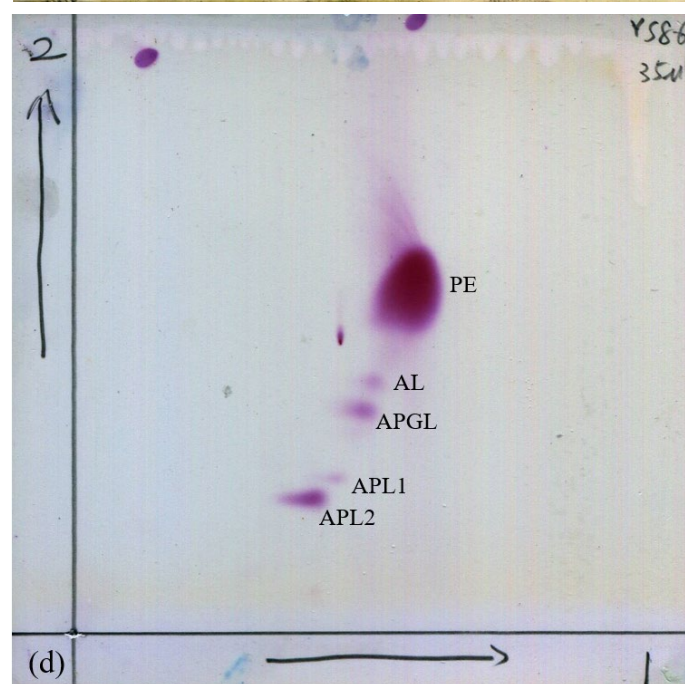
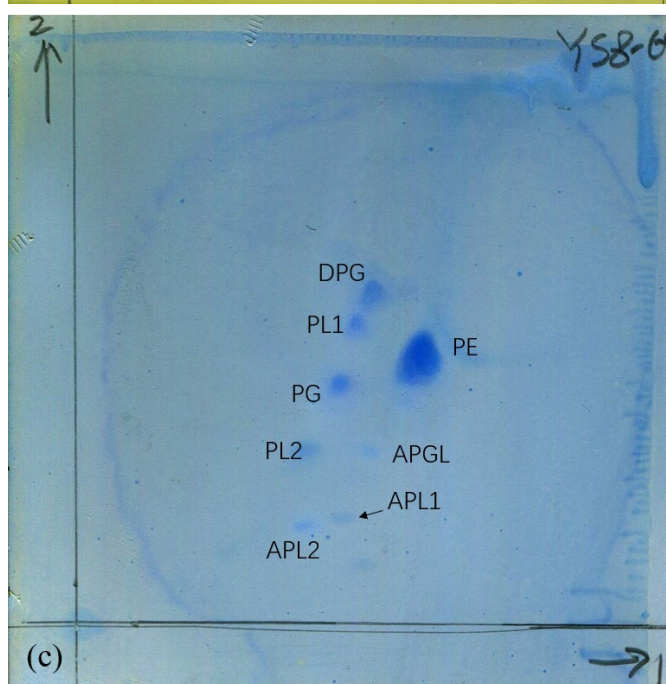
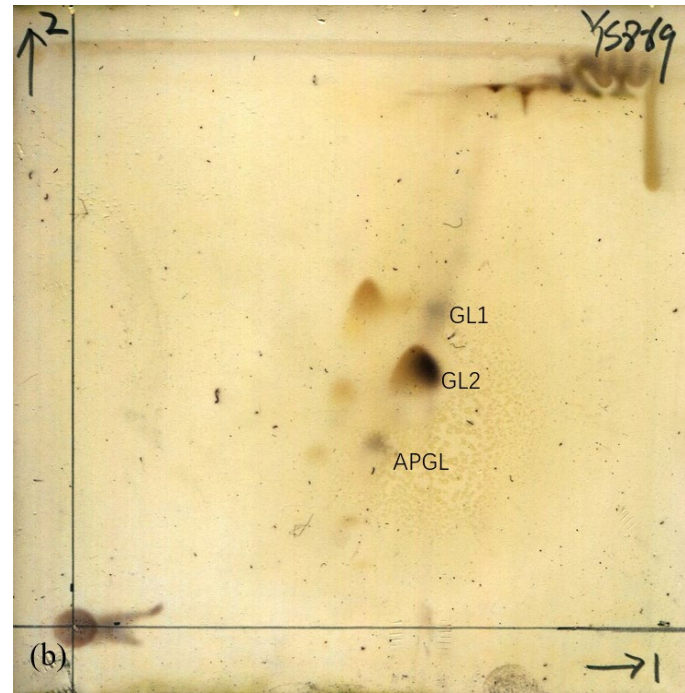
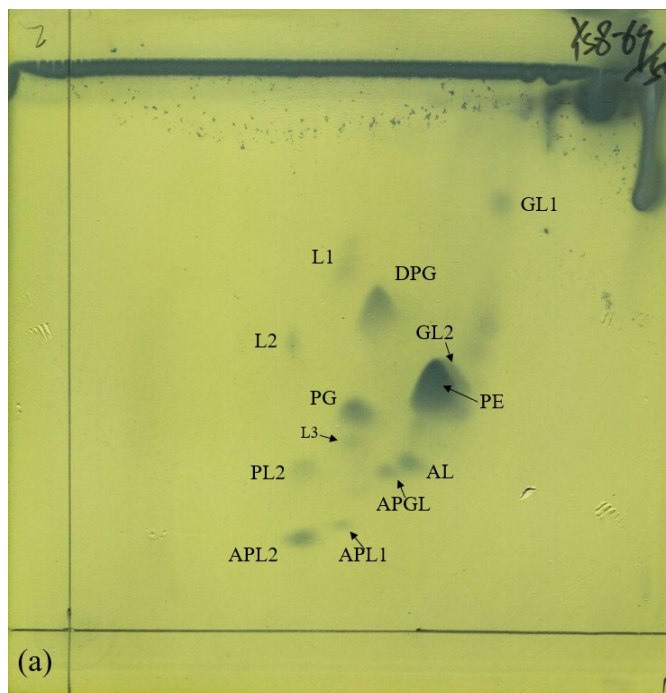


Fig S3. Two-dimensional TLC plate image of total polar lipids of strain YS8-69^T with different spraying reagents:

(a) phosphomolybdic acid;

(b) sulfuric acid

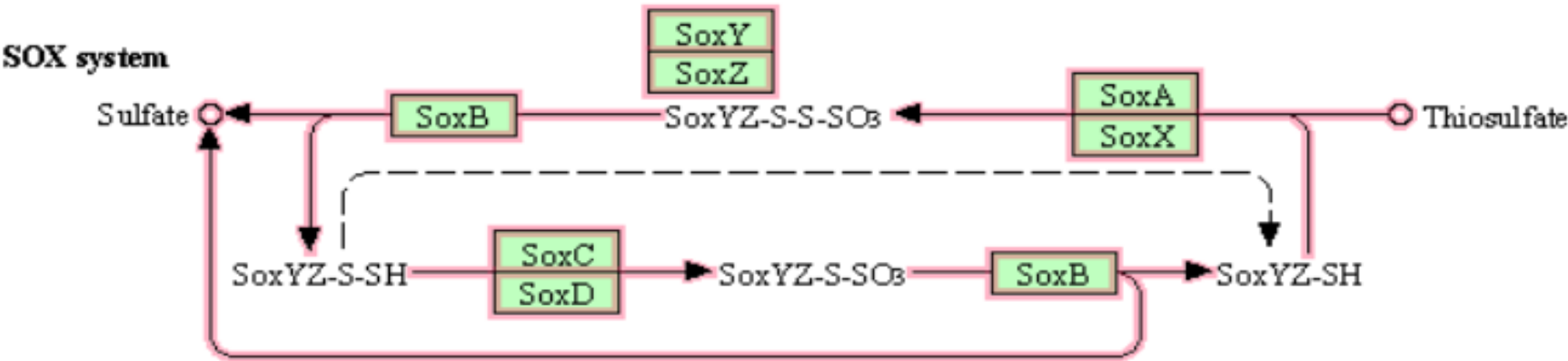
(c) acidmolybdenum blue;

(d) ninhydrin;

KO	Name
K17222	soxA; L-cysteine S-thiosulfotransferase [EC:2.8.5.2]
K17223	soxX; L-cysteine S-thiosulfotransferase [EC:2.8.5.2]
K17224	soxB; S-sulfosulfanyl-L-cysteine sulfohydrolase [EC:3.1.6.20]
K17225	soxC; sulfane dehydrogenase subunit SoxC
K22622	soxD; S-disulfanyl-L-cysteine oxidoreductase SoxD [EC:1.8.2.6]
K17226	soxY; sulfur-oxidizing protein SoxY
K17227	soxZ; sulfur-oxidizing protein SoxZ

Table S4. (a) sulfur oxidation genes consisting of sox system and **Fig. S5** (b) pathway modules of thiosulfate-oxidation by SOX complex in the draft genome of strain YS8-69^T

(a)



(b)

Table S6. Genomic features and function annotation result of YS8-69^T and its reference strains.

Strains/species: 1, strain YS8-69^T; 2, *Limnobacter humi* NBRC 111650^T ; 3, *Limnobacter thiooxidans* DSM13612^T; 4, *Limnobacter alexandrii* LZ-4^T;

	1	2	3	4
Genomic Size (bp)	3,162,663	3,235,113	3,533,643	3,488,419
Contigs	20	29	6	14
G+C (%)	51.73	56.02	55.0	52.54
Coding genes	2944	3044	3205	3286
rRNA	3	3	6	3
tRNA	37	39	40	41
COG	1967(66.81%)	2048(67.28%)	2402(74.95%)	2182(66.40%)
KEGG	2204(74.86%)	2317(76.12%)	2110(65.83%)	2468(75.11%)
ANI and dDDH values toYS8-69 ^T	100/100	73/15.8	79/36	80.6/50.2