

1 **Supplementary Information**

2 **Genome-based classification of *Acidihalobacter prosperus* F5 (=DSM 105917**  
3 **=JCM 32255) as *Acidihalobacter yilgarnensis* sp. nov.**

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19 **Supplementary Table S1.** List of microorganisms used in this study and the NCBI accession  
 20 numbers for their respective genomes.

<b>Organism</b>	<b>NCBI Accession No.</b>
<i>Acidihalobacter</i> strain F5 <sup>T</sup>	CP017415.1
<i>Acidihalobacter prosperus</i> DSM 5130 <sup>T</sup>	JQSG00000000.2
<i>Acidihalobacter ferrooxydans</i> DSM 14175 <sup>T</sup>	CP019434.1
<i>Acidihalobacter aeolianus</i> DSM14174 <sup>T</sup>	CP017448.1
<i>Halothiobacillus neopolitanus</i> ATCC 23641	CP001801.1
<i>Alkalimnicola ehrlichii</i> ATCC BAA-1101 <sup>T</sup>	CP000453.1
<i>Ectothiorhodospira haloalkaliphila</i> ATCC 51935 <sup>T</sup>	KK214995.1
<i>Ectothiorhodospira marina</i> DSM 241 <sup>T</sup>	FOAA00000000
<i>Ectothiorhodospira mobilis</i> DSM 4180	FOUO01000000
<i>Ectothiorhodospira magna</i> DSM 22250 <sup>T</sup> (strain B7-7)	NZ_FOFO00000000
<i>Halorhodospira halochloris</i> DSM 1059 <sup>T</sup>	CP007268.1
<i>Halorhodospira halophila</i> DSM 244 <sup>T</sup>	CP000544.1
<i>Thioalkalivibrio denitrificans</i> DSM 13742 <sup>T</sup>	MVBK00000000.1
<i>Thioalkalivibrio nitratireducens</i> DSM 14787 <sup>T</sup>	CP003989.2
<i>Thiorhodospira sibirica</i> ATCC 700588 <sup>T</sup>	AGFD00000000

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23 **Supplementary Table S2.** List of COG families used for the construction of the multiprotein  
24 concatenated ribosomal phylogenomic tree.

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|----|--------------------|---------------------------|
| 26 | 1. <b>COG0048</b>  | Ribosomal protein S12     |
| 27 | 2. <b>COG0049</b>  | Ribosomal protein S7      |
| 28 | 3. <b>COG0051</b>  | Ribosomal protein S10     |
| 29 | 4. <b>COG0052</b>  | Ribosomal protein S2      |
| 30 | 5. <b>COG0080</b>  | Ribosomal protein L11     |
| 31 | 6. <b>COG0081</b>  | Ribosomal protein L1      |
| 32 | 7. <b>COG0087</b>  | Ribosomal protein L3      |
| 33 | 8. <b>COG0088</b>  | Ribosomal protein L4      |
| 34 | 9. <b>COG0089</b>  | Ribosomal protein L23     |
| 35 | 10. <b>COG0090</b> | Ribosomal protein L2      |
| 36 | 11. <b>COG0091</b> | Ribosomal protein L22     |
| 37 | 12. <b>COG0092</b> | Ribosomal protein S3      |
| 38 | 13. <b>COG0093</b> | Ribosomal protein L14     |
| 39 | 14. <b>COG0094</b> | Ribosomal protein L5      |
| 40 | 15. <b>COG0096</b> | Ribosomal protein S8      |
| 41 | 16. <b>COG0097</b> | Ribosomal protein L6P/L9E |
| 42 | 17. <b>COG0098</b> | Ribosomal protein S5      |
| 43 | 18. <b>COG0100</b> | Ribosomal protein S11     |
| 44 | 19. <b>COG0102</b> | Ribosomal protein L13     |
| 45 | 20. <b>COG0103</b> | Ribosomal protein S9      |

46	21. <b>COG0184</b>	Ribosomal protein S15P/S13E
47	22. <b>COG0185</b>	Ribosomal protein S19
48	23. <b>COG0186</b>	Ribosomal protein S17
49	24. <b>COG0198</b>	Ribosomal protein L24
50	25. <b>COG0199</b>	Ribosomal protein S14
51	26. <b>COG0200</b>	Ribosomal protein L15
52	27. <b>COG0244</b>	Ribosomal protein L10
53	28. <b>COG0256</b>	Ribosomal protein L18
54	29. <b>COG0522</b>	Ribosomal protein S4 and related proteins
55	30. <b>COG1841</b>	Ribosomal protein L30/L7E