

## Supplementary Tables

**Table S1.** Nucleotide BLAST summary. Results with F63 and R533 primers against proposed bacterial genera.

Genre	Species	Strain	Starting position (base number)	Final position (base number)	Amplified region (base pairs)
<i>Acidimicrobium</i>	<i>ferrooxidans</i>	DSM 10332	39	490	451
	<i>acidophilum</i>	MS Silver	22	460	438
	<i>angustum</i>	KLB	22	456	434
<i>Acidiphilium</i>	<i>cryptum</i>	DSM 2389/Lhet2	22	454	432
	<i>multivorum</i>	AIU 301	42	474	432
	<i>organovorum</i>	TFC	22	454	432
	<i>albertensis</i>	DSM 14366	29	509	480
	<i>calvus</i>	KU	19	501	482
	<i>ferridurans</i>	ATCC 33020	18	498	480
<i>Acidithiobacillus</i>	<i>ferriphilus</i>	M20	6	486	480
	<i>ferrivorans</i>	NO 37	39	519	480
	<i>ferrooxidans</i>	ATCC 23270	39	519	480
	<i>thiooxidans</i>	ATCC 19377	14	494	480
<i>Acidobacterium</i>	<i>capsulatum</i>	ATCC 51196	39	484	445
	<i>acetivorans</i>	A63	43	543	500
	<i>amilsii</i>	TR1	39	536	497
<i>Desulfurella</i>	<i>kamshatkensis</i>	K 119	15	515	500
	<i>multipotens</i>	RH 8	15	515	500
	<i>propionica</i>	U 8	15	515	500
<i>Leptospirillum</i>	<i>ferriphilum</i>	P3a	27	525	498
	<i>ferrooxidans</i>	L15	19	517	498

**Table S2.** Sequences obtained from the original and the adapted communities after cloning process

T6-OC1
TACGACTCACTATAGGGCGAATTGGGCCCCGACGTCGCATGCTCCCGGCCGCCATGGCGG CCGCGGGAATTCGATT <b>CAGGCCTAACACATGCAAGTC</b> GAACGGTAACAGGTCTTCGGAT GCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACAA CCCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCG GACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCCA CCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACA CGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCCTG ACGAAGCAATGCCGCGTGGATGAAGAAGGCCTTCGGGTGTAAAGTCCTTTCGTGGAGG ACGAAAAGGTGGGTCTAATAACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGG CTAACTCCGT <b>GCCAGCAGCCGCGTAATA</b> AATCACTAGTGAATTCGCGGCCGCCTGCAGG TCGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTGT CACCTAAATAGCTTGGCGTAATCATG
T6-OC2
TTGGGCCCCGACGTCGCATGCTCCCGGCCGCCATGGCGGCCGCGGAATTCGATT <b>CAGGC</b> <b>CTAACACATGCAAGTC</b> GAACGGTAACAGGTCTTCGGATGCTGACGAGTGGCGGACGGGT GAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACAACCCAGGGAAACTTGGGCTAAT ACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCGGACCTCGCGCTAAGAGAGGAG CCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCACCAAGGCGACGATCGGTAGCT GGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAG GCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCCTGACGAAGCAATGCCGCGTGGAT GAAGAAGGCCTTCGGGTGTAAAGTCCTTTCGTGGAGGACGAAAAGGTGGGTCTAATA CAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGGCTAACTCCGT <b>GCCAGCAGCCG</b> <b>CGGTAATA</b> AATCACTAGTGAATTCGCGGCCGCCTGCAGGTCGACCATATGGGAGAGCTCC CAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTGTCACCTAAATAGCTTGGCGTAA TCATG
T6-OC3
TACGACTCACTATAGGGCGAATTGGGCCCCGAACGTCGCATGCTCCCGGCCGCCATGGCG GCCGCGGGAATTCGATT <b>CAGGCCTAACACATGCAAGTC</b> GAACGGTAACAGGTCTTCGGA TGCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACA ACCCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTC GGACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCC ACCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGAC ACGGCCCAGACTCCTAGGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCCT GACGAAGCAATGCCGCGTGGATGAAGAAGGCCTCCGGGTGTAGAGTCCTTTCGTGGAG GACGAAAAGGTGGGTCTAATAACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCG GCTAACTCCGT <b>GCCAGCAGCCGCGTAATA</b> AATCACTAGTGAATTCGCGGCCGCCTGCAG GTGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTG TCACCTAAATAGCT
T6-OC4
TACGACTCACTATAGGGCGATTGGGCCCCGACGTCGCATGCTCCCGGCCGCCATGGCGGC CGCGGGAATTCGATT <b>CAGGCCTAACACATGCAAGTC</b> GAACGGTAACAGGTCTTCGGATG CTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACAAC

CCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCGG  
ACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCAC  
CAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACAC  
GGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCTGA  
CGAAGCAATGCCGCGTGGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCGTGGAGGA  
CGAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGGC  
TAACTCCGTGCCAGCAGCCGCGGTAATAATCACTAGTGAATTCGCGGCCGCCTGCAGGT  
CGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTGTC  
ACCTAAATAGCTTGGCGTAATCATG

#### T6-OC5

TACGACTCACTATAGGGCGAATTGGGCCCGACGTTCGCATGCTCCCGGCCGCCATGGCGG  
CCGCGGGAATTCGATT**CAGGCCTAACACATGCAAGTC**GAACGGTAACAGGTCTTCGGAT  
GCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACAA  
CCCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCG  
GACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCCA  
CCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACA  
CGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCTG  
ACGAAGCAATGCCGCGTGGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCGTGGAGG  
ACGAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGG  
CTAACTCCGTGCCAGCAGCCGCGGTAATAATCACTAGTGAATTCGCGGCCGCCTGCAGG  
TCGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTGT  
CACCTAAATAGCTTGGCGTAATCATG

#### T6-OC6

TACGACTCACTATAGGGCGAATTGGGCCCGACGTTCGCATGCTCCCGGCCGCCATGGCGG  
CCGCGGGAATTCGATT**CAGGCCTAACACATGCAAGTC**GAACGGTAACAGGTCTTCGGAT  
GCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGGACAA  
CCCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCG  
GACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCCA  
CCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACA  
CGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCTG  
ACGAAGCAATGCCGCGTGGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCGTGGAGG  
ACGAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGG  
CTAACTCCGTGCCAGCAGCCGCGGTAATAATCACTAGTGAATTCGCGGCCGCCTGCAGG  
TCGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATAGTGT  
CACCTAAATAGCTTGGCGTAATCATG

#### T6-AC1

GTAATACGACTCACTATAGGGCGAATTGGGCCCGACGTTCGCATGCTCCCGGCCGCCATG  
GCGGCCGCGGGAATTCGATT**CAGGCCTAACACATGCAAGTC**GAACGGTAACAGGTCTTC  
GGATGCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGG  
ACAACCCAGGGAAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATC  
TTCGGACCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGG  
CCCACCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGA  
GACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAAC  
CCTGACGAAGCAATGCCGCGTGGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCGTG  
GAGGACGAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGAAGCA  
CCGGCTAACTCCGTGCCAGCAGCCGCGGTAATAATCACTAGTGAATTCGCGGCCGCCTG

CAGGTCGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTATA GTGTCACCTAAATAGCTTGGCGTAATCATG
<b>T6-AC2</b>
ATTGTAATACGACTCACTATAGGGCGAATTGGGCCCGACGTGCGCATGCTCCCGGCCGCC ATGGCGGCCGCGGGAATTCGATT <b>CAGGCCTAACACATGCAAGTCGAACGGTAACAGGTC</b> <b>TTCGGATGCTGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGG</b> <b>GGGACAACCCAGGGAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGGAAAGCGGGG</b> <b>GATCTTCGGACCTCGCGCTAAGAGAGGAGCCTGCGTCCGATTAGCTAGTTGGCGGGTA</b> <b>AAGGCCACCAAGGCGACGATCGGTAGCTGGTCTGAGAGGACAACCAGCCACACTGGGT</b> <b>CTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGG</b> <b>CAACCCTGACGAAGCAATGCCGCGTGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTT</b> <b>CGTGGAGGACGAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGA</b> <b>AGCACCGGCTAACTCCGT<b>GCCAGCAGCCGCGGTAATA</b>AATCACTAGTGAATTCGCGGCCG</b>
CCTGCAGGTCGACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTC TATAGTGTACCTAAATAGCTTGGCGTAATCATGGTCATAG
<b>T6-AC3</b>
CGACTCACTATAGGGCGAATTGGGCCCGACGTGCGCATGCTCCCGGCCGCCATGGCGGCC GCGGGAATTCGATT <b>CAGGCCTAACACATGCAAGTCGAACGGTAACAGGTCCTTCGGATGC</b> <b>TGACGAGTGGCGGACGGGTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGACAACC</b> <b>CAGGGAACTTGGGCTAATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCGGA</b> <b>CCTCGCGCTAAGAGAGGAGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCACC</b> <b>AAGGCGACGATCGGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACACG</b> <b>GCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCCTGAC</b> <b>GAAGCAATGCCGCGTGATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCTGAGGAC</b> <b>GAAAAGGTGGGTTCTAATACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGGCT</b> <b>AACTCCGT<b>GCCAGCAGCCGCGTAATA</b>AATCACTAGTGAATTCGCGGCCGCTGCAGGTC</b>
GACCATATGGGAGAGCTCCCAACGCGTTGGATGCATAGCTTGAGTATTCTTATAGTGT CAC
<b>T6-AC4</b>
ATGATTACGCCAAGCTATTTAGGTGACACTATAGAATACTCAAGCTATGCATCCAACGC GTTGGGAGCTCTCCCATATGGTCGACCTGCAGGCGGCCGGAATTCAGTAGTGATT <b>CAG</b> <b>GCCTAACACATGCAAGTCGAACGGTAACAGGTCCTTCGGATGCTGACGAGTGGCGGACGG</b> <b>GTGAGTAATGCGTAGGAATCTGTCTTTTAGTGGGGACAACCCAGGGAACTTGGGCTA</b> <b>ATACCGCATGAGCCCTGAGGGGGAAAGCGGGGGATCTTCGGACCTCGCGCTAAGAGAGG</b> <b>AGCCTACGTCCGATTAGCTAGTTGGCGGGGTAAAGGCCACCAAGGCGACGATCGGTAG</b> <b>CTGGTCTGAGAGGACGACCAGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGG</b> <b>AGGCAGCAGTGGGGAATTTTTCGCAATGGGGGCAACCCTGACGAAGCAATGCCGCGTGG</b> <b>ATGAAGAAGGCCTTCGGGTTGTAAAGTCCTTTCTGAGGACGAAAAGGTGGGTTCTAA</b> <b>TACAATCTGCTATTGACGTGAATCCAAGAAGAAGCACCGGCTAACTCCGT<b>GCCAGCAGC</b></b> <b>CGCGGTAATAATCGAATTC</b> CCGCGGCCGCCATGGCGGCCGGGAGCATGCGACGTCGGGC CCAATTCGCCCTATAGTGAGTCG

Blue: primers 63FW and 533RV (reverse-complement). Green: consensus amplified sequence.