Supplementary Material 1

Bottom-up Construction and Screening of Algae-bacteria Consortia for Volatile Organic Compounds (VOCs) Biodegradation

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Table S1 (part 1). 96-well plates layout for screening

S2 and S2 copy											
A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
A5	A6	A7	A	B5	B6	B7	B	C5	C6	C7	C
D1	D2	D3	D4	E1	E2	E3	E4	F1	F2	F3	F4
D5	D6	D7	D	E5	E6	E7	E	F5	F6	F7	F
A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
A5	A6	A7	A	B5	B6	B7	B	C5	C6	C7	C
D1	D2	D3	D4	E1	E2	E3	E4	F1	F2	F3	F4
D5	D6	D7	D	E5	E6	E7	E	F5	F6	F7	F

S3 I / S3 I copy											
A12	A13	A14	A15	B12	B13	B14	B15	C12	C13	C14	C15
A16	A17	A23	A24	B16	B17	B23	B24	C16	C17	C23	C24
A25	A26	A27	A34	B25	B26	B27	B34	C25	C26	C27	C34
A35	A36	A37	A45	B35	B36	B37	B45	C35	C36	C37	C45
A46	A47	A56	A57	B46	B47	B56	B57	C46	C47	C56	C57
A67	A	A	A	B67	B	B	B	C67	C	C	C
A	A	A	A	B	B	B	B	C	C	C	C
A	A	A	A	B	B	B	B	C	C	C	C

S3 II / S3 II copy											
D12	D13	D14	D15	E12	E13	E14	E15	F12	F13	F14	F15
D16	D17	D23	D24	E16	E17	E23	E24	F16	F17	F23	F24
D25	D26	D27	D34	E25	E26	E27	E34	F25	F26	F27	F34
D35	D36	D37	D45	E35	E36	E37	E45	F35	F36	F37	F45
D46	D47	D56	D57	E46	E47	E56	E57	F46	F47	F56	F57
D67	D	D	D	E67	E	E	E	F67	F	F	F
D	D	D	D	E	E	E	E	F	F	F	F
D	D	D	D	E	E	E	E	F	F	F	F

S4 I / S4 I copy											
A123	A124	A125	A126	A127	A135	A134	A136	A137	A145	A146	A147
A156	A157	A167	A234	A235	A236	A237	A245	A246	A247	A256	A257
A267	A345	A346	A347	A356	A357	A367	A456	A457	A467	A567	A
B123	B124	B125	B126	B127	B134	B135	B136	B137	B145	B146	B147
B156	B157	B167	B234	B235	B236	B237	B245	B246	B247	B256	B257
B267	B345	B346	B347	B356	B357	B367	B456	B457	B467	B567	B
C123	C124	C125	C126	C127	C134	C135	C136	C137	C145	C146	C147
C156	C157	C167	C234	C235	C236	C237	C245	C246	C247	C256	C257

Table S1 (part 2). 96-well plates layout for screening

S4II/S4II copy												S4 III and S4 III copy											
C267	C345	C346	C347	C356	C357	C367	C456	C457	C467	C567	C	F156	F157	F167	F234	F235	F236	F237	F245	F246	F247	F256	F257
D123	D124	D125	D126	D127	D134	D135	D136	D137	D145	D146	D147	F267	F345	F346	F347	F356	F357	F367	F456	F457	F467	F567	F
D156	D157	D167	D234	D235	D236	D237	D245	D246	D247	D256	D257	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT
D267	D345	D346	D347	D356	D357	D367	D456	D457	D467	D567	D	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT
E123	E124	E125	E126	E127	E134	E135	E136	E137	E145	E146	E147	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT
E156	E157	E167	E234	E235	E236	E237	E245	E246	E247	E256	E257	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT	CT
E267	E345	E346	E347	E356	E357	E367	E456	E457	E467	E567	E	F267	F345	F346	F347	F356	F357	F367	F456	F457	F467	F567	F
F123	F124	F125	F126	F127	F134	F135	F136	F137	F145	F146	F147	F156	F157	F167	F234	F235	F236	F237	F245	F246	F247	F256	F257
S5 I /S5 I copy												S5 II / S5 II copy											
A1234	A1235	A1236	A1237	A1245	A1246	A1247	A1256	A1257	A1267	A1345	A1346	C2357	C2367	C2456	C2457	C2467	C2567	C3456	C3457	C3467	C3567	C4567	C
A1347	A1356	A1357	A1367	A1456	A1457	A1467	A1567	A2345	A2346	A2347	A2356	D1234	D1235	D1236	D1237	D1245	D1246	D1247	D1256	D1257	D1267	D1345	D1346
A2357	A2367	A2456	A2457	A2467	A2567	A3456	A3457	A3467	A3567	A4567	A	D1347	D1356	D1357	D1367	D1456	D1457	D1467	D1567	D2345	D2346	D2347	D2356
B1234	B1235	B1236	B1237	B1245	B1246	B1247	B1256	B1257	B1267	B1345	B1346	D2357	D2367	D2456	D2457	D2467	D2567	D3456	D3457	D3467	D3567	D4567	D
B1347	B1356	B1357	B1367	B1456	B1457	B1467	B1567	B2345	B2346	B2347	B2356	E1234	E1235	E1236	E1237	E1245	E1246	E1247	E1256	E1257	E1267	E1345	E1346
B2357	B2367	B2456	B2457	B2467	B2567	B3456	B3457	B3467	B3567	B4567	B	E1347	E1356	E1357	E1367	E1456	E1457	E1467	E1567	E2345	E2346	E2347	E2356
C1234	C1235	C1236	C1237	C1245	C1246	C1247	C1256	C1257	C1267	C1345	C1346	E2357	E2367	E2456	E2457	E2467	E2567	E3456	E3457	E3467	E3567	E4567	E
C1347	C1356	C1357	C1367	C1456	C1457	C1467	C1567	C2345	C2346	C2347	C2356	F1234	F1235	F1236	F1237	F1245	F1246	F1247	F1256	F1257	F1267	F1345	F1346

Table S1 (part 3). 96-well plates layout for screening

S5 III and S5 III copy											
F1347	F1356	F1357	F1367	F1456	F1457	F1467	F1567	F2345	F2346	F2347	F2356
F2357	F2367	F2456	F2457	F2467	F2567	F3456	F3457	F3467	F3576	F4567	F
BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
F2357	F2367	F2456	F2457	F2467	F2567	F3456	F3457	F3467	F3576	F4567	F
F1347	F1356	F1357	F1367	F1456	F1457	F1467	F1567	F2345	F2346	F2347	F2356

S6 I / S6 I copy											
A12345	A12346	A12347	A12356	A12357	A12367	A12456	A12457	A12467	A12567	A13456	A13457
A13467	A13567	A14567	A23456	A23457	A23467	A23567	A24567	A34567	A	A	A
B12345	B12346	B12347	B12356	B12357	B12367	B12456	B12457	B12467	B12567	B13456	B13457
B13467	B13567	B14567	B23456	B23457	B23467	B23567	B24567	B34567	B	B	B
C12345	C12346	C12347	C12356	C12357	C12367	C12456	C12457	C12467	C12567	C13456	C13457
C13467	C13567	C14567	C23456	C23457	C23467	C23567	C24567	C34567	C	C	C
D12345	D12346	D12347	D12356	D12357	D12367	D12456	D12457	D12467	D12567	D13456	D13457
D13467	D13567	D14567	D23456	D23457	D23467	D23567	D24567	D34567	D	D	D

S6 II and S6 II copy											
E12345	E12346	E12347	E12356	E12357	E12367	E12456	E12457	E12467	E12567	E13456	E13457
E13467	E13567	E14567	E23456	E23457	E23467	E23567	E24567	E34567	E	E	E
F12345	F12346	F12347	F12356	F12357	F12367	F12456	F12457	F12467	F12567	F13456	F13457
F13467	F13567	F14567	F23456	F23457	F23467	F23567	F24567	F34567	F	F	F
E12345	E12346	E12347	E12356	E12357	E12367	E12456	E12457	E12467	E12567	E13456	E13457
E13467	E13567	E14567	E23456	E23457	E23467	E23567	E24567	E34567	E	E	E

S7 copy											
A12345	A12346	A12347	A12356	A12357	A12367	A12456	A12457	A12467	A12567	A13456	A13457
A13467	A13567	A14567	A23456	A23457	A23467	A23567	A24567	A34567	A	A	A
B12345	B12346	B12347	B12356	B12357	B12367	B12456	B12457	B12467	B12567	B13456	B13457
B13467	B13567	B14567	B23456	B23457	B23467	B23567	B24567	B34567	B	B	B
C12345	C12346	C12347	C12356	C12357	C12367	C12456	C12457	C12467	C12567	C13456	C13457
C13467	C13567	C14567	C23456	C23457	C23467	C23567	C24567	C34567	C	C	C
D12345	D12346	D12347	D12356	D12357	D12367	D12456	D12457	D12467	D12567	D13456	D13457
D13467	D13567	D14567	D23456	D23457	D23467	D23567	D24567	D34567	D	D	D

Table S1 (part 4). 96-well plates layout for screening

S7 , S8 and S8 copy											
A12345 6	A12345 7	A12346 7	A12356 7	A12456 7	A13456 7	A23456 7	CT	CT	CT	CT	CT
B12345 6	B12345 7	B12346 7	B12356 7	B12456 7	B13456 7	B23456 7	CT	CT	CT	CT	CT
C12345 6	C12345 7	C12346 7	C12356 7	C12456 7	C13456 7	C23456 7	CT	CT	CT	CT	CT
D12345 6	D12345 7	D12346 7	D12356 7	D12456 7	D13456 7	D23456 7	CT	CT	CT	CT	CT
E12345 6	E123457	E123467	E123567	E124567	E134567	E234567	CT	CT	CT	CT	CT
F123456	F123457	F123467	F123567	F124567	F134567	F234567	CT	CT	CT	CT	CT
A12345 67	B12345 67	C12345 67	D12345 67	E123456 7	F123456 7	CT	CT	CT	CT	CT	CT
A12345 67	B12345 67	C12345 67	D12345 67	E123456 7	F123456 7	CT	CT	CT	CT	CT	CT

Note: Layout of 96-well plates in the screening experiment. S1-S8 refers to size 1- size 8 consortia,i.e. consortia with 1-8 co-cultured bacteira strains.S1-S8 copy refers to biological replica. A: *Pseudomonas fluorescens*, B: *Rhodococcus erythropolis*, C: *Pseudomonas sp*.,D: *Delftia sp*.,E: *Rhodococcus sp1.*,F: *Rhodococcus sp2.*, 1: *Pseudomonas syringae*, 2: *Agromyces atrinae*, 3: *Cupriavidus metallidurans*, 4: *Ochrobactrum anthropic*, 5: *Plantibacter flavus*, 6: *Plantibacter sp.*, 7: *Rhodococcus sp3.*, CT: axenic algae control (*Coelastrella terrestris*), BK: blank.

Table S2 Non-degrader labels and combination

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
N/A	1	2	3	4	5	6	7	1, 2	1, 3	1, 4	1, 5	1, 6	1, 7	2, 3	2, 4
17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
2, 5	2, 6	2, 7	3, 4	3, 5	3, 6	3, 7	4, 5	4, 6	4, 7	5, 6	5, 7	6, 7	1, 2, 3	1, 2, 4	1, 2, 5
33	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
1, 2, 6	1, 2, 7	1, 3, 4	1, 3, 5	1, 3, 6	1, 3, 7	1, 4, 5	1, 4, 6	1, 4, 7	1, 5, 6	1, 5, 7	1, 6, 7	2, 3, 4	2, 3, 5	2, 3, 6	2, 3, 7
49	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**
2, 4, 5	2, 4, 6	2, 4, 7	2, 5, 6	2, 5, 7	2, 6, 7	3, 4, 5	3, 4, 6	3, 4, 7	3, 5, 6	3, 5, 7	3, 6, 7	4, 5, 6	4, 5, 7	4, 6, 7	5, 6, 7
65	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
1, 2, 3, 4	1, 2, 3, 5	1, 2, 3, 6	1, 2, 3, 7	1, 2, 4, 5	1, 2, 4, 6	1, 2, 4, 7	1, 2, 5, 6	1, 2, 5, 7	1, 2, 6, 7	1, 3, 4, 5	1, 3, 4, 6	1, 3, 4, 7	1, 3, 5, 6	1, 3, 5, 7	1, 3, 6, 7
81	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**
1, 4, 5, 6	1, 4, 5, 7	1, 4, 6, 7	1, 5, 6, 7	2, 3, 4, 5	2, 3, 4, 6	2, 3, 4, 7	2, 3, 5, 6	2, 3, 5, 7	2, 3, 6, 7	2, 4, 5, 6	2, 4, 5, 7	2, 4, 6, 7	2, 5, 6, 7	3, 4, 5, 6	3, 4, 5, 7
97	**98**	**99**	**100**	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**	**112**
3, 4, 6, 7	3, 5, 6, 7	4, 5, 6, 7	1, 2, 3, 4, 5	1, 2, 3, 4, 6	1, 2, 3, 4, 7	1, 2, 3, 5, 6	1, 2, 3, 5, 7	1, 2, 3, 6, 7	1, 2, 4, 5, 6	1, 2, 4, 5, 7	1, 2, 4, 6, 7	1, 2, 5, 6, 7	1, 3, 4, 5, 6	1, 3, 4, 5, 7	1, 3, 4, 6, 7
113	**114**	**115**	**116**	**117**	**118**	**119**	**120**	**121**	**122**	**123**	**124**	**125**	**126**	**127**	**128**
1, 3, 5, 6, 7	1, 4, 5, 6, 7	2, 3, 4, 5, 6	2, 3, 4, 5, 7	2, 3, 4, 6, 7	2, 3, 5, 6, 7	2, 4, 5, 6, 7	3, 4, 5, 6, 7	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 7	1, 2, 3, 4, 6, 7	1, 2, 3, 5, 6, 7	1, 2, 4, 5, 6, 7	1, 3, 4, 5, 6, 7	2, 3, 4, 5, 6, 7	1, 2, 3, 4, 5, 6

Serial labels of combinations of non-degraders are represented by numbers in red bold. Actual compositions/elements of non-degraders are represented by numbers in black non-bold. 1: *Pseudomonas syringae*, 2: *Agromyces atrinae*, 3: *Cupriavidus metallidurans*, 4: *Ochrobactrum anthropic*, 5: *Plantibacter flavus*, 6: *Plantibacter sp.*, 7: *Rhodococcus sp3*

Table S3 Primer design/selection for qPCR

Name	Sequence(5'-3')	Amp. length
1F	CTTCGGGCCTTGCGCTATCA	449 bp
1R	CTCTAGCTTGCCAGTTTTGG	
2F	TGAAGGAGAGCTTGCTCTTT	415 bp
2R	AGCCGGTGCTTTTTCTGCAA	
3F	AGTAGCTGGTCTGAGAGGAC	193 bp
3R	CCACGCCAGGTATTAACCAG	
4F	CGGGGGAAAGATTTATCGGC	364 bp
4R	AAATCCGAACAACGCTAGCC	
5F	GAGCTTCCACCGCATGGTGA	480 bp
5R	CCGCTACACCAGGAATTCCAA	
BF	GTACGGCACCCACCCGGTAA	400 bp
BR	ACTTGGCAGGCAACGTCTTG	
DR	GGCCTTCGGGTTGTAAACTG	338 bp
DF	GTCAGTACAGGTCCAGGGGA	

Primers designed using NCBI Primer designing tool, a custom database of 16s rDNA sequences of pre-identified strains was used for primer pair specificity check.

Table S4 Primers tested for qPCR in Chapter 5.

Primer ID	Sequence
1.2F(9)_ZC	ACACTGGAACTGAGACACGG
2.3F(9)_ZC	ACTCTGGGATAACTGCGGGA
3.3F(6)_ZC	CACACTGGGACTGAGACACG
4.1F(3)_ZC	TAAAGGCCTACCAAGGCGAC
5.1F(1)_ZC	GTGAGGTAACGGCTCACCAA
6.2F(3)_ZC	TGTTGGTGAGGTAACGGCTC
7.1F(1)_ZC	GGAGAAAGCAGGGGACCTTC
A.4F(10)_ZC	CACTGGAACTGAGACACGGT
B.1F(7)_ZC	GGGGTAATGGCCTACCAAGG
C.3F(10)_ZC	GCTCACCAAGGCTACGATCC
D.2F(3)_ZC	AAGCTTACCAAGCCGACGAT
E.2F(7)_ZC	GGGGTAATGGCCTACCAAGG
F.3F(10)_ZC	CGGCCTATCAGCTTGTTGGT
Uni_R_ZC	TATTACCGCGGCTGCTGGCA
1F3_II	GGAGAAAGCAGGGGACCTTC
2FSP_II	GGACTCTGGGATAACTGCGG
3F1_II	GAGCGGCCGATGTCTGATTA
4FSP_II	TTTATCGGCAAAGGATGAGC
5F1_II	TTGGTCAAGGATGGACTCGC
AF1_II	TCAGATGAGCCTAGGTCGGA
BR2_II(R)	ATTCCGTGGAAGGAACCCAC
DR2_II(R)	GCATGAGCGTCAGTACAGGT
R2F	TGCCAGCAGCCGCGGTAATA
RHO-F(L)	GCCGCCACCGACAAGTT
RHO-F(S)	ATCATCCACAAGCACCAGGT
RHO-R(S)	CTGCGAGTAGTAGCCCTCCT
RHO-R(S2)	GGGCTTGAGCGTGGTGATCT

RHO-R(L)	CACCATGAGGTGCAGGTG
R.R(SPF)	CGTTCGAGCCTCGCCGA
R.R(SPR)	AGTGCTTGCGGTTGTAGTGC
R.O(SPF)	ATATCAGCCCAATCCGCTCC
R.O(SPR)	AGCTCGGGCGAGTTCTCGA
R.E(SPF) (BF)*	GTACGGCACCCACCCGGTAA
R.E(SPR) (BR)*	ACTTGGCAGGCAACGTCTTG
1F_III (1F)	CTTCGGGCCTTGCGCTATCA
1R_III (1R)	CTCTAGCTTGCCAGTTTTGG
2F_III (2F)	TGAAGGAGAGCTTGCTCTTT
2R_III (2R)	AGCCGGTGCTTTTTCTGCAA
3F_III (3F)	AGTAGCTGGTCTGAGAGGAC
3R_III (3R)	CCACGCCAGGTATTAACCAG
4F_III (4F)	CGGGGGAAAGATTTATCGGC
4R_III (4R)	AAATCCGAACAACGCTAGCC
5F_III (5F)	GAGCTTCCACCGCATGGTGA
5R_III (5R)	CCGCTACACCAGGAATTCCAA
BF_III(2)	CCTGCACTTCGGGATAAGCC
BR_III(2)	GTATCGCCTGCAAGCCAGCA
DF_III (6R)	GGCCTTCGGGTTGTAAACTG
DR_III (6R)	GTCAGTACAGGTCCAGGGGA
Note: A total of 46 primers and 39 forward-reverse (F-R) primer set combinations were tested. Primers 1F_III, 1R_III, 2F_III, 2R_III, 3F_III, 3R_III, 4F_III, 4R_III, 5F_III, 5R_III, R.E(SPF), R.E(SPR), DF_III, and DR_III were selected as the final primers for the qPCR assay. These primers have been renamed in accordance with the order they are listed in Table 5.3, Chapter 5 of the thesis.	

16s rRNA gen gene sequences

The following genes from bacteria included in the exemplar consortia were used for primer design in Chapter 5.

>1. *Pseudomonas* (16S)

TGCAGTCGAGCGGTAGAGAGAAGCTTGCTTCTCTTGAGAGCGGCGGACGGGTGAGTAATGCCTAGG
AATCTGCCTGGTAGTGGGGGATAACGTTCGGAAACGAACGCTAATACCGCATACGTCCTACGGGAGAA
AGCAGGGGACCTTCGGGCCTTGCGCTATCAGATGAGCCTAGGTCGGATTAGCTAGTTGGTGAGGTAAT
GGCTCACCAAGGCGACGATCCGTAACTGGTCTGAGAGGATGATCAGTCACACTGGAACTGAGACACG
GTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCCAT
GCCGCGTGTGTGAAGAAGGTCTTCGGATTGTAAAGCACTTTAAGTTGGGAGGAAGGGCAGTTACCTA
ATACGTAATTGTTTTGACGTTACCGACAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCCGCGGTAAT
ACAGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTTGTTAAGTTGA
ATGTGAAATCCCCGGGCTCAACCTGGGAACTGCATCCAAAACTGGCAAGCTAGAGTATGGTAGAGGG
TGGTGGAATTTCCTGTGTAGCGGTGAAATGCGTAGATATAGGAAGGAACACCAGTGGCGAAGGCGAC
CACCTGGACTGATACTGACACTGAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTA
GTCCACGCCGTAAACGATGTCAACTAGCCGTTGGGAGCCTTGAGCTCTTAGTGGCGCAGCTAACGCAT
TAAGTTGACCGCCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGGGCCCGCACA
AGCGGTGGAGCATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGCCTTGACATCCAATGA
ACTTTCTAGAGATAGATTGGTGCCTTCGGGAACATTGAGACAGGTGCTGCATGGCTGTCGTCAGCTCG
TGTCGTGAGATGTTGGGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTTAGTTACCAGCACGTAATGG
TGGGCACTCTAAGGAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAAGTCATCATG
GCCCTTACGGCCTGGGCTACACACGTGCTACAATGGTCGGTACAAAGGGTTGCCAAGCCGCGAGGTG
GAGCTAATCCCATAAAACCGATCGTAGTCCGGATCGCAGTCTGCAACTCGACTGCGTGAAGTCGGAAT
CGCTAGTAATCGCGAATCAGAATGTCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACA
CCATGGGAGTGGGTTGCACCAGAAGTAGCTAGTCTAACCTTCGGGGGGACGGTTACCACGGTGTGAT
TCATGACT

>2. *Agromyces* (16S)

GACGAACGCTGGCGGCGTGCTTAACACATGCAAGTCGAACGATGAAGGAGAGCTTGCTCTTTGGATT
AGTGGCGAACGGGTGAGTAACACGTGAGTAACCTGCCCTGGACTCTGGGATAACTGCGGGAAACTGT
AGCTAATACCGGATATGACCTTGGATCGCATGATTCTTGGTGGAAAGTTTTTCGGTCTGGGATGGACTC
GCGGCCTATCAGCTTGTTGGTGAGGTAATGGCTCACCAAGGCGTCGACGGGTAGCCGGCCTGAGAGG
GTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATT
GCACAATGGGCGCAAGCCTGATGCAGCAACGCCGCGTGGGGGATGACGGCCTTCGGGTTGTAAACC
TCTTTTAGTAAGGAAGAAGCCTTCGGGTGACGGTACTTGCAGAAAAAGCACCGGCTAACTACGTGCC
AGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCGGAATTATTGGGCGTAAAGAGCTCGTAGGC
GGTTTGTCGCGTCTGCTGTGAAATCCCGAGGCTCAACCTCGGGCGTGCAGTGGGTACGGGCAGACTG
GAGTGCGGTAGGGGAGAATGGAATTCCTGGTGTAGCGGTGGAATGCGCAGATATCAGGAGGAACAC
CGATGGCGAAGGCAGTTCTCTGGGCCGTAACTGACGCTGAGGAGCGAAAGCGTGGGGAGCGAACA
GGATTAGATACCCTGGTAGTCCACGCCGTAAACGTTGGGCGCTAGATGTGGGGACCTTTCCACGGTTT
CCGTGTCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAGTACGGCCGCAAGGCTAAAACTCAAAGG

AATTGACGGGGGCCCGCACAAGCGGCGGAGCATGCGGATTAATTCGATGCAACGCGAAGAACCTTAC
CAAGGCTTGACATGTACGAGAACGCCTCAGAAATGAGGAACTCTTTGGACACTCGTATGCAGGTGGT
GCATGGTTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTCGTCG
TATGTTGCCAGCACGTAATGGTGGGAACTCATATGAGACTGCCGGGGTCAACTCGGAGGAAGGTGGG
GATGACGTCAAATCATCATGCCCCTTATGTCTTGGGCTTCACGCATGCTACAATGGCCGGTACAAAGGG
CTGCGATGTCGTAAGGCGGAGCGAATCCCAAAAAGCCGGTCTCAGTTCGGATTGAGGTCTGCAACTC
GACCTCATGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCAACGCTGCGGTGAATACGTTCCCGGGCC
TTGTACACACCGCCCGTCAAGTCATGAAAGTCGGTAACACCCGAAGCCAGTGGCCTAACCGTAAGGA
GGGAGCTGTCGAAGGTGGGATCGGTGATTAGGACT

>3 *Cupriavidus metallidurans* (16S)

GGTGCTTCCTGCAGTCGACGGCAGCGCGGACTTCGGTCTGGCGGCGAGTGGCGAACGGGTGAGTAT
ACATCGGAACGTACCCTGTTGTGGGGGATAACTAGTCGAAAGATTAGCTAATACCGCATACGACCTGA
GGGTGAAAGTGGGGGACCGCAAGGCCTCACGCAGCAGGAGCGGCCGATGTCTGATTAGCTAGTTGG
TGGGGTAAAGGCCCACCAAGGCGACGATCAGTAGCTGGTCTGAGAGGACGATCAGCCACACTGGGA
CTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTGGACAATGGGGGCAACCCT
GATCCAGCAATGCCGCGTGTGTGAAGAAGGCCTTCGGGTTGTAAAGCACTTTTGTCCGGAAAGAAAT
CGCGCTGGTTAATACCTGGCGTGGATGACGGTACCGGAAGAATAAGCACCGGCTAACTACGTGCCAGC
AGCCGCGGTAATACGTAGGGTGCGAGCGTTAATCGGAATTACTGGGCGTAAAGCGTGCGCAGGCGGT
TTTGTAAGACAGGCGTGAAATCCCCGGGCTTAACCTGGGAATTGCGCTTGTGACTGCAAGGCTAGAG
TGCGTCAGAGGGGGGTAGAATTCCACGTGTAGCAGTGAAATGCGTAGAGATGTGGAGGAATACCGAT
GGCGAAGGCAGCCCCCTGGGACGTGACTGACGCTCATGCACGAAAGCGTGGGGAGCAAACAGGATT
AGATACCCTGGTAGTCCACGCCCTAAACGATGTCAACTAGTTGTTGGGGATTCATTTTCTCAGTAACGT
AGCTAACGCGTGAAGTTGACCGCCTGGGGAGTACGGTCGCAAGATTAAAACTCAAAGGAATTGACGG
GGACCCGCACAAGCGGTGGATGATGTGGATTAATTCGATGCAACGCGAAAAACCTTACCTACCCTTGA
CATGCCACTAACGAAGCAGAGATGCATTAGGTGCCCGAAAGGGAAAGTGGACACAGGTGCTGCATGG
CTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTGTCTCTAGTT
GCTACGCAAGAGCACTCTAGAGAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAAG
TCCTCATGGCCCTTATGGGTAGGGCTTCACACGTCATACAATGGTGCGTACAGAGGGTTGCCAACCCG
CGAGGGGGAGCTAATCCCAGAAAACGCATCGTAGTCCGGATCGTAGTCTGCAACTCGACTACGTGAA
GCTGGAATCGCTAGTAATCGCGGATCAGCATGCCGCGGTGAATACGTTCCCGGGTCTTGTACACACCG
CCCGTCACACCATGGGAGTGGGTTTGCCAGAAGTAGTAGCCTAACCGCAAGGAGGCG

>4. *Ochrobactrum anthropic* (16S)

AACGAACGCTGGCGGCAGGCTTAACACATGCAAGTCGAACGGTCTCTTCGGAGGCAGTGGCAGACG
GGTGAGTAACGCGTGGGAATCTACCTTTTGCTACGGAACAACAGTTGGAAACGACTGCTAATACCGTA
TGTGCCCTTCGGGGGAAAGATTTATCGGCAAAGGATGAGCCCGCGTTGGATTAGCTAGTTGGTAGGG
TAAAGGCCTACCAAGGCGACGATCCATAGCTGGTCTGAGAGGATGATCAGCCACACTGGGACTGAGA
CACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCA
GCCATGCCGCGTGAGTGATGAAGGCCCTAGGGTTGTAAAGCTCTTTCACCGGTGAAGATAATGACGGT
AACCGGAGAAGAAGCCCCGGCTAACTTCGTGCCAGCAGCCGCGGTAATACGAAGGGGGCTAGCGTT
GTTCGGATTTACTGGGCGTAAAGCGCACGTAGGCGGACTTTTAAGTCAGGGGTGAAATCCCGGGGCT
CAACCCCGGAACTGCCTTTGATACTGGAAGTCTTGAGTATGGTAGAGGTGAGTGGAATTCCGAGTGTA
GAGGTGAAATTCGTAGATATTCGGAGGAACACCAGTGGCGAAGGCGGCTCACTGGACCATTACTGAC

GCTGAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGATG
AATGTTAGCCGTTGGGGAGTTTACTCTTCGGTGGCGCAGCTAACGCATTAAACATTCCGCCTGGGGAG
TACGGTCGCAAGATTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGTGGAGCATGTGGTTT
AATTCGAAGCAACGCGCAGAACCTTACCAGCCCTTGACATACCGGTCGCGGACACAGAGATGTGTCTT
TCAGTTCGGCTGGACCGGATACAGGTGCTGCATGGCTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTT
AAGTCCCGCAACGAGCGCAACCCTCGCCCTTAGTTGCCAGCATTTAGTTGGGCACTCTAAGGGGACTG
CCAGTGATAAGCTGGAGGAAGGTGGGGATGACGTCAAGTCCTCATGGCCCTTACGGGCTGGGCTACA
CACGTGCTACAATGGTGGTGACAGTGGGCAGCGAGCGTGCGAGCGCAAGCTAATCTCCAAAAGCCAT
CTCAGTTCGGATTGCACTCTGCAACTCGAGTGCATGAAGTTGGAATCGCTAGTAATCGCGGATCAGCAT
GCCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTTGGTTTTACCCG
AAGGCACTGTGCTAACCGCAGGAGGCAGGGACC

>5. *Plantibacter* (16S)

ATGAAGCCCAGCTTGCTGGGTGGATTAGTGGCGAACGGGTGAGTAACACGTGAGTAACCTGCCCTTG
ACTCTGGGATAAGCGTTGGAAACGACGTCTAATACCGGATACGAGCTTCCACCGCATGGTGAGTTGCT
GGAAAGAATTTTGGTCAAGGATGGACTCGCGGCCTATCAGCTAGTTGGTGAGGTAACGGCTCACCAA
GGCGACGACGGGTAGCCGGCCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGAC
TCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCAACGCCGCGT
GAGGGACGACGGCCTTCGGGTTGTAAACCTCTTTTAGCAGGGAAGAAGCGAAAGTGACGGTACCTG
CAGAAAAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCGG
AATTATTGGGCGTAAAGAGCTCGTAGGCGGTTTGTCGCGTCTGCTGTGAAATCCCGAGGCTCAACCTC
GGGTCTGCAGTGGGTACGGGCAGACTAGAGTGCGGTAGGGGAGATTGGAATTCCTGGTGTAGCGGT
GGAATGCGCAGATATCAGGAGGAACACCGATGGCGAAGGCAGATCTCTGGGCCGCTACTGACGCTGA
GGAGCGAAAGGGTGGGGAGCAAACAGGCTTAGATACCCTGGTAGTCCACCCCGTAAACGTTGGGCG
CTAGATGTGGGGACCATTCCACGGTTTCCGTGTCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAGT
ACGGCCGCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGCGGAGCATGCGGATT
AATTCGATGCAACGCGAAGAACCTTACCAAGGCTTGACATATACGAGACGGGCCAGA

>6. *Plantibacter* (16S)

ATGAAGCCCAGCTTGCTGGGTGGATTAGTGGCGAACGGGTGAGTAACACGTGAGTAACCTGCCCTTG
ACTCTGGGATAAGCGTTGGAAACGACGTCTAATACCGGATACGAGCTTCCACCGCATGGTGAGTTGCT
GGAAAGAATTTTGGTCAAGGATGGACTCGCGGCCTATCAGCTAGTTGGTGAGGTAACGGCTCACCAA
GGCGACGACGGGTAGCCGGCCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGAC
TCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCAACGCCGCGT
GAGGGACGACGGCCTTCGGGTTGTAAACCTCTTTTAGCAGGGAAGAAGCGAAAGTGACGGTACCTG
CAGAAAAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCGG
AATTATTGGGCGTAAAGAGCTCGTAGGCGGTTTGTCGCGTCTGCTGTGAAATCCCGAGGCTCAACCTC
GGGTCTGCAGTGGGTACGGGCAGACTAGAGTGCGGTAGGGGAGATTGGAATTCCTGGTGTAGCGGT
GGAATGCGCAGATATCAGGAGGAACACCGATGGCGAAGGCAGATCTCTGGGCCGCTACTGACGCTGA
GGAGCGAAAGGGTGGGGAGCAAACAGGCTTAGATACCCTGGTAGTCCACCCCGTAAACGTTGGGCG
CTAGATGTGGGGACCATTCCACGGTTTCCGTGTCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAGT
ACGGCCGCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGCGGAGCATGCGGATT
AATTCGATGCAACGCGAAGAACCTTACCAAGGCTTGACATATACGAGACGGGCCAGA

>7. *Rhodococcu.* (16S)

CCGTTAGAGTTTTGATCCCCTCTGCTCAGATTGAACGCTGGCGGCAGGCCTAACACATGCAAGTCGAG
CGGATGAGAAGAGCTTGCTCTTCGATTCAGCGGCGGACGGGTGAGTAATACCTAGGAATCTGCCTGG
TAGTGGGGGACAACGTTTCGAAAGGAACGCTAATACCGCATACGTCCTACGGGAGAAAGCAGGGGA
CCTTCGGGCCTTGCGCTATCAGATGAGCCTAGGTCGGATTAGCTAGTTGGTGAGGTAATGGCTCACCA
AGGCTACGATCCGTAACTGGTCTGAGAGGATGATCAGTCACACTGGAACTGAGACACGGTCCAGACTC
CTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCCATGCCGCGTGTG
TGAAGAAGGTCTTCGGATTGTAAAGCACTTTAAGTTGGGAGGAAGGGCAGTAAGCGAATACCTTGCT
GTTTTGACGTTACCGACAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCCGCGGTAATACAGAGGGT
GCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTCGTTAAGTTGGATGTGAAATC
CCCGGGCTCAACCTGGGAACTGCATCCAAAACTGGCGAGCTAGAGTAGGGCAGAGGGTGGTGGAAT
TTCCTGTGTAGCGGTGAAATGCGTAGATATAGGAAGGAACACCAGTGGCGAAGGCGACCACCTGGGC
TCATACTGACACTGAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCC
GTAAACGATGTCAACTAGCCGTTGGAATCCTTGAGATTTTAGTGGCGCAGCTAACGCATTAAGTTGACC
GCCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGGGCCCGCACAAGCGGTGGA
GCATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGCCTTGACATCCAATGAACTTTCCAGA
GATGGATTGGTGCCTTCGGGAACATTGAGACAGGTGCTGCATGGCTGTCGTCAGCTCGTGTCGTGAG
ATGTTGGNGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTTAGTTACCAGCACGTTATGGTGGGCAC
TCTAAGGAGACTGCCGGTGACAAACCGGARGAAGGTGGGGATGACGTCAAGTCATCATGGCCCTTAC
GGCCTGGGCTACACACGTGCTACAATGGTCGGTACAGNAGGGTCGCCAAGCCGCGAGGTGGAGCTA
ATCTCACAAAACCGATCGTAGTCCNGGATCGCAGTCTGCAACTCGACTGCGTGAAGTCGGAATCGCTA
GTAATCGCGAATCAGAATGTCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATG
GGGNAGTGGGTTNGCACCAGAAGTAGCTAGTCTAACCNTTCGGGAGGACGGTTACCACGGTGTGAT
TCATGACTGGGGGTGAAGTCGTACAAAGGG

>A. *Pseudomonas* (16S)

CATGCAGTCGAGCGGTAGAGAGAAGCTTGCTTCTCTTGAGAGCGGCGGACGGGTGAGTAATGCCTAG
GAATCTGCCTGGTAGTGGGGGATAACGTTCGGAAACGAACGCTAATACCGCATACGTCCTACGGGAGA
AAGCAGGGGACCTTCGGGCCTTGCGCTATCAGATGAGCCTAGGTCGGATTAGCTAGTTGGTGAGGTA
ATGGCTCACCAAGGCGACGATCCGTAACTGGTCTGAGAGGATGATCAGTCACACTGGAACTGAGACA
CGGTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCC
ATGCCGCGTGTGTGAAGAAGGTCTTCGGATTGTAAAGCACTTTAAGTTGGGAGGAAGGGCAGTTACC
TAATACGTGATTGTTTTGACGTTACCGACAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCCGCGGTA
ATACAGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTTGTTAAGTT
GGATGTGAAATCCCCGGGCTCAACCTGGGAACTGCATTCAAAACTGACTGACTAGAGTATGGTAGAG
GGTGGTGGAATTTCCTGTGTAGCGGTGAAATGCGTAGATATAGGAAGGAACACCAGTGGCGAAGGCG
ACCACCTGGACTAATACTGACACTGAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGG
TAGTCCACGCCGTAAACGATGTCAACTAGCCGTTGGAAGCCTTGAGCTTTTAGTGGCGCAGCTAACGC
ATTAAGTTGACCGCCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGGGCCCGCA
CAAGCGGTGGAGCATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGCCTTGACATCCAATG
AACTTTCCAGAGATGGATTGGTGCCTTCGGGAACATTGAGACAGGTGCTGCATGGCTGTCGTCAGCTC
GTGTCGTGAGATGTTGGGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTTAGTTACCAGCACGTCATG
GTGGGCACTCTAAGGAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAAGTCATCAT

GGCCCTTACGGCCTGGGCTACACACGTGCTACAATGGTCGGTACAGAGGGTTGCCAAGCCGCGAGGT
GGAGCTAATCCCATAAAACCGATCGTAGTCCGGATCGCAGTCTGCAACTCGACTGCGTGAAGTCGGAA
TCGCTAGTAATCGCGAATCAGAATGTCGCGGTGAATACGTTCCCGGGCC

>B. *Rhodococcus erythropolis* (16S)

CCGCTGTAGAGTTTGATCATGGCTCAGGACGAACGCTGGCGGCGTGCTTAACACATGCAAGTCGAGC
GGTAAGGCCTTTCGGGGTACACGAGCGGCGAACGGGTGAGTAACACGTGGGTGATCTGCCCTGCACT
TCGGGATAAGCCTGGGAAACTGGGTCTAATACCGGATATGACCTCCTATTGCATGGTGTGTGGTGGAA
AGATTTATCGGTGCAGGATGGGCCCGCGGCCTATCAGCTTGTTGGTGGGGTAATGGCCTACCAAGGCG
ACGACGGGTAGCCGACCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTA
CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGG
GATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGACGAAGCGCAAGTGACGGTACCTGCAGAA
GAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCGGAATTA
CTGGGCGTAAAGAGTTCGTAGGCGGTTTGTCGCGTCGTTTGTGAAAACCAGCAGCTCAACTGCTGGC
TTGCAGGCGATACGGGCAGACTTGAGTACTGCAGGGGAGACTGGAATTCCTGGTGTAGCGGTGAAAT
GCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGGTCTCTGGGCAGTAACTGACGCTGAGGAA
CGAAAGCGTGGGTAGCGAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGGTGGGCGCTAGG
TGTGGGTTCCTTCCACGGAATCCGTGCCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAGTACGGCC
GCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGCGGAGCATGTGGATTAATTCG
ATGCAACGCGAAGAACCTTACCTGGGTTTGACATATACCGGAAAGCTGCAGAGATGTGGCCCCCCTTG
TGGTCGGTATACAGGTGGTGCATGGCTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCA
ACGAGCGCAACCCCTATCTTATGTTGCCAGCACGTTATGGTGGGGACTCGTAAGAGACTGCCGGGGTC
AACTCGGAGGAAGGTGGGGACGACGTCAAGTCATCATGCCCCTTATGTCCAGGGCTTCACACATGCTA
CAATGGCCAGTACAGAGGGCTGCGAGACCGTGAGGTGGAGCGAATCCCTTAAAGCTGGTCTCAGTTC
GGATCGGGGTCTGCAACTCGACCCCGTGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCAACGCTGC
GGTGAATACTTTCCCGGGCCTTGTACCCCCCGCCCGTCACGTCATGAAAGTTCGGTACACCCCGAGGC
CGG

>C. *Pseudomonas* (16S)

TGCAGTCGAGCGGATGAGAAGAGCTTGCTCTTCGATTCAGCGGCGGACGGGTGAGTAATACCTAGGA
ATCTGCCTGGTAGTGGGGGACAACGTTTCGAAAGGAACGCTAATACCGCATACGTCCTACGGGAGAA
AGCAGGGGACCTTCGGGCCTTGCGCTATCAGATGAGCCTAGGTCGGATTAGCTAGTTGGTGAGGTAAT
GGCTCACCAAGGCTACGATCCGTAACTGGTCTGAGAGGATGATCAGTCACACTGGAACTGAGACACG
GTCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCCAT
GCCGCGTGTGTGAAGAAGGTCTTCGGATTGTAAAGCACTTTAAGTTGGGAGGAAGGGCAGTAAGCG
AATACCTTGCTGTTTTGACGTTACCGACAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCCGCGGTA
ATACAGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTCGTTAAGTT
GGATGTGAAATCCCCGGGCTCAACCTGGGAACTGCATCCAAAACTGGCGAGCTAGAGTAGGGCAGA
GGGTGGTGGAATTTCCTGTGTAGCGGTGAAATGCGTAGATATAGGAAGGAACACCAGTGGCGAAGGC
GACCACCTGGGCTCATACTGACACTGAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTG
GTAGTCCACGCCGTAAACGATGTCAACTAGCCGTTGGAATCCTTGAGATTTTAGTGGCGCAGCTAACG
CATTAAGTTGACCGCCTGGGGAGTACGGCCGCAAGGTTAAAACTCAAATGAATTGACGGGGGCCCGC
ACAAGCGGTGGAGCATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGCCTTGACATCCAAT
GAACTTTCCAGAGATGGATTGGTGCCTTCGGGAACATTGAGACAGGTGCTGCATGGCTGTCGTCAGCT

CGTGTCGTGAGATGTTGGGTTAAGTCCCGTAACGAGCGCAACCCTTGTCCTTAGTTACCAGCACGTTAT
GGTGGGCAYTCTAAGGAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAAGTCATCA
TGGCCCTTACGGCCTGGGCTACACACGTGCTACAATGGTCGGTACAGAGGGTCGCCAAGCCGCGAGG
TGGAGCTAATCTCACAAAACCGATCGTAGTCCGGATCGCAGTCTGCAACTCGACTGCGTGAAGTCGGA
ATCGCTAGTAATCGCGAATCAGAATGTCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCA
CACCATGGGAGTGGGTTGCACCAGAAGTAGCTAGTCTAACCTTCGGGAGGAC

>D. *Delftia* (16S)

GCCTTACACATGCAAGTCGAACGGTAACAGGTCTTCGGACGCTGACGAGTGGCGAACGGGTGAGTAA
TACATCGGAACGTGCCCAGTCGTGGGGGATAACTACTCGAAAGAGTAGCTAATACCGCATACGATCTG
AGGATGAAAGCGGGGGACCTTCGGGCCTCGCGCGATTGGAGCGGCCGATGGCAGATTAGGTAGTTG
GTGGGATAAAAGCTTACCAAGCCGACGATCTGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGGA
CTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTGGACAATGGGCGAAAGCCT
GATCCAGCAATGCCGCGTGCAGGATGAAGGCCTTCGGGTTGTAAACTGCTTTTGTACGGAACGAAAA
AGCTTCTCCTAATACGAGAGGCCCATGACGGTACCGTAAGAATAAGCACCGGCTAACTACGTGCCAGC
AGCCGCGGTAATACGTAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGTGCGCAGGCGGT
TATGTAAGACAGATGTGAAATCCCCGGGCTCAACCTGGGAACTGCATTTGTGACTGCATGGCTAGAGT
ACGGTAGAGGGGGATGGAATTCCGCGTGTAGCAGTGAAATGCGTAGATATGCGGAGGAACACCGATG
GCGAAGGCAATCCCCTGGACCTGTACTGACGCTCATGCACGAAAGCGTGGGGAGCAAACAGGATTAG
ATACCCTGGTAGTCCACGCCCTAAACGATGTCAACTGGTTGTTGGGAATTAGTTTTCTCAGTAACGAAG
CTAACGCGTGAAGTTGACCGCCTGGGGAGTACGGCCGCAAGGTTGAAACTCAAAGGAATTGACGGG
GACCCGCACAAGCGGTGGATGATGTGGTTTAATTCGATGCAACGCGAAAAACCTTACCCACCTTTGAC
ATGGCAGGAAGTTTCCAGAGATGGATTCGTGCTCGAAAGAGAACCTGCACACAGGTGCTGCATGGCT
GTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTGTCATTAGTTGC
TACATTTAGTTGGGCACTCTAATGAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGATGACGTCAA
GTCCTCATGGCCCTTATAGGTGGGGCTACACACGTCATACAATGGCTGGTACAGAGGGTTGCCAACCC
GCGAGGGGGAGCTAATCCCATAAAACCAGTCGTAGTCCGGATCGCAGTCTGCAACTCGACTGCGTGA
AGTCGGAATCGCTAGTAATCGCGGATCAGCATGCCGCGGTGAATACGTTCCCGGGTCTTGTACACACC
GCCCGTCACACCATGGGAGCGGGTCTCGCCAGAAGTAGGTAGCCTAACCGCAAGGAGGGCGCTTACC
ACGGCGGG

>E. *Rhodococcus* (16S)

CCGCTGTAGAGTTTGATCATGGCTCAGGACGAACGCTGGCGGCGTGCTTAACACATGCAAGTCGAGC
GGTAAGGCCTTTCGGGGTACACGAGCGGCGAACGGGTGAGTAACACGTGGGTGATCTGCCCTGCACT
TCGGGATAAGCCTGGGAAACTGGGTCTAATACCGGATATGACCTCCTATTGCATGGTGTGTGGTGGAA
AGATTTATCGGTGCAGGATGGGCCCGCGGCCTATCAGCTTGTTGGTGGGGTAATGGCCTACCAAGGCG
ACGACGGGTAGCCGACCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAGACTCCTA
CGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGCGTGAGG
GATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGACGAAGCGCAAGTGACGGTACCTGCAGAA
GAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCGGAATTA
CTGGGCGTAAAGAGTTCGTAGGCGGTTTGTCGCGTCGTTTGTGAAAACCAGCAGCTCAACTGCTGGC
TTGCAGGCGATACGGGCAGACTTGAGTACTGCAGGGGAGACTGGAATTCCTGGTGTAGCGGTGAAAT
GCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGGTCTCTGGGCAGTAACTGACGCTGAGGAA
CGAAAGCGTGGGTAGCGAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGGTGGGCGCTAGG

TGTGGGTTCCTTCCACGGAATCCGTGCCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAGTACGGCC
GCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGCGGAGCATGTGGATTAATTCG
ATGCAACGCGAAGAACCTTACCTGGGTTTGACATATACCGGAAAGCTGCAGAGATGTGGCCCCCCTTG
TGGTCGGTATACAGGTGGTGCATGGCTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCA
ACGAGCGCAACCCCTATCTTATGTTGCCAGCACGTTATGGTGGGGACTCGTAAGAGACTGCCGGGGTC
AACTCGGAGGAAGGTGGGGACGACGTCAAGTCATCATGCCCCTTATGTCCAGGGCTTCACACATGCTA
CAATGGCCAGTACAGAGGGCTGCGAGACCGTGAGGTGGAGCGAATCCCTTAAAGCTGGTCTCAGTTC
GGATCGGGGTCTGCAACTCGACCCCGTGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCAACGCTGC
GGTGAATACTTTCCCGGGCCTTGTACCCCCCGCCCGTCACGTCATGAAAGTTCGGTAC

>F. *Rhodococcus* (16S)

TCGAGCGGTAAGGCCTTTCGGGGTACACGAGCGGCGAACGGGTGAGTAACACGTGGGTGATCTGCC
CTGCACTTCGGGATAAGCCTGGGAAACTGGGTCTAATACCGGATATGACCTCCTATCGCATGGTGGGTG
GTGGAAAGATTTATCGGTGCAGGATGGGCCCGCGGCCTATCAGCTTGTTGGTGGGGTAATGGCCTACC
AAGGCGACGACGGGTAGCCGACCTGAGAGGGTGACCGGCCACACTGGGACTGAGACACGGCCCAG
ACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGAAAGCCTGATGCAGCGACGCCGC
GTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCAGGGACGAAGCGCAAGTGACGGTACCT
GCAGAAGAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGCAAGCGTTGTCCG
GAATTACTGGGCGTAAAGAGTTCGTAGGCGGTTTGTCGCGTCGTTTGTGAAAACCAGCAGCTCAACT
GCTGGCTTGCAGGCGATACGGGCAGACTTGAGTACTGCAGGGGAGACTGGAATTCCTGGTGTAGCG
GTGAAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGGTCTCTGGGCAGTAACTGACGC
TGAGGAACGAAAGCGTGGGTAGCGAACAGGATTAGATACCCTGGTAGTCCACGCCGTAAACGGTGGG
CGCTAGGTGTGGGTTCCTTCCACGGAATCCGTGCCGTAGCTAACGCATTAAGCGCCCCGCCTGGGGAG
TACGGCCGCAAGGCTAAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGCGGAGCATGTGGAT
TAATTCGATGCAACGCGAAGAACCTTACCTGGGTTTGACATATACCGGAAAGCTGCAGAGATGTGGCC
CCCCTTGTGGTCGGTATACAGGTGGTGCATGGCTGTCGTCAGCTCGTGTCGTGAGATGTTGGGTTAAG
TCCCGCAACGAGCGCAACCCCTATCTTATGTTGCCAGCACGTTATGGTGGGGACTCGTAAGAGACTGC
CGGGGTCAACTCGGAGGAAGGTGGGGACGACGTCAAGTCATCATGCCCCTTATGTCCAGGGCTTCAC
ACATGCTACAATGGCCAGTACAGAGGGCTGCGAGACCGTGAGGTGGAGCGAATCCCTTAAAGCTGGT
CTCAGTTCGGATCGGGGTCTGCAACTCGACCCCGTGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCA
ACGCTGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACGTCATGAAAGTCGGTAACACC
CGAA