

Appendix 7

Sequences of Isolated Taxa

(by Hotchkiss, Landy, Mitchell)

Site 1 : Amsterdam, Netherlands – Spruce of unknown age

UoP Ref: 18W1

BACPOLES Ref: 1CTD 1-320

Clone 1 closely resembled: *Pseudomonas* sp.

Seq: UoP Ref:18W1 Clone 1

ATTACCGCGTGCTGCTGGCACAGAGTTAGCCGGTGCTTATTCTGTCCGGTAACGTCAAAACAGCAA
AGTATTAATTTACTGCCCTTCTCCCAACTTAAAGTGCTTTACAATCCGAAGACCTTCTTCACACAC
GCGGCATGGCTGGATCAGGCTTTCGCCATTGTCCAATATTCCCA

Clone 6 closely resembled: *Massilia* sp., *Herbaspirillum* sp., Uncultured beta proteobacterium,
Zoogloea sp., *Matsuebacter* sp., *Oxalobacter* sp.

Seq: UoP Ref:18W1 Clone 6

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGTGCTTATTCTTCAGGTACCGTCATTAGATCTGG
ATATTAGCCAGACCCGTTTCTTCCCTGACAAAAGAGCTTTACAACCCGAAGGCCTTCTTCACTCAC
GCGGCATTGCTGGATCAGGCTTTCGCCATTGTCCAATTTCCCA

Clone 7 closely resembled: *Bergeyella* sp., Flavobacteriaceae str, *Riemerella anatipestifer*,
Chryseobacterium jll, *Flavobacterium* sp., *Haloanella gallinarum*

Seq: UoP Ref:18W1 Clone 7

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGTGCTTATTCATACTGTACCTTCAGCTACCCTCA
CGAGAGTAGGTTTATCCCAGTATAAAAGAAGTTTACAACCCATAGGGCCTTAGTCCTTCACGCGG
GATGGCTGGATCAGGCTCTCACCATTGTCCAATATTCTCA

Clone 8 closely resembled: *Pseudomonas* sp., Uncultured gamma proteobacterium

Seq: UoP Ref:18W1 Clone 8

ATTACCGCGGTCTGCTGGCACAGAGTTAGCCGGTGCTTATTCTGTCCGGTAACGTCAAAACAGCAA
AGTATTAATTTACTGCCCTTCTCCCAACTTAAAGTGCTTTACAATCCGAAGACCTTCTTCACACAC
GCGGCATGGCTGGATCAGGCTTTCGCCATTGTCCAATATTCCCA

Clone 9 closely resembled: Uncultured eubacterium, Uncultured bacterium clone, uncultured
spirochete clone, Uncultured *Treponema* sp.

Seq: UoP Ref:18W1 Clone 9

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGGGCTTATTCGTCCGGTTCATGTCATCACGCGGG
CATTCCCTCCCACGCTTATTCTTCCCCAACAAAAGGACTTTACAACCTTTCGGCCTTCGTATCCA
CGCGGCGTCGCTCCGTCAGACTTTCGTCCATTGCGGAATATTCTTAG

Clone 10 closely resembled: *Brevundimonas vesicularis*, Glacial ice bacterium, Alpha
proteobacterium, *Caulobacter crescentus*, *Asticcacaulis* sp.

Seq:UoP Ref:18W1 Clone 10

ATTACCGCGTGCTGCTGGCACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTATCGTC
CCCGGTGAAAGAATTTACAATCCTAAGACCTTCATCATTACGCGGCATGGCTGCGTCAGGCTT
TCGCCATTGTCCAATTTCCCA

UoP Ref: 28w1

BACPOLES Ref:1ATD1 180 (Netherlands)

Clone 1 closely resembled: *Chryseobacterium scophthalmum*, *Flavobacterium* sp. *Chryseobacterium*
sp.

Seq: UoP Ref: 28w1 Clone 1

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGTGCTTATTCGTATAGTACCTTCAGCTACTCTCA
CGAGAGTAGGTTTATCCCTATACAAAAGAAGTTTACAACCCATAGGGCCGTCGTCTTCACGCGG
GATGGCTGGATCAGGCTCTCACCATTGTCCAATATTCTCA

Clone 2 closely resembled: *Flavobacterium* sp.

Seq: **UoP Ref: 28w1 Clone 2**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGATCCTTATTCTCACAGTACCGTCAAGCTGATTCA
CGAATCAGTGTTCCTTCTGTGCAAAAGCAGTTTACAATCCATAGGACCGTCATCCTGCACGCG
CATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCCTCA

Clone 4 closely resembled: *Cytophaga* sp., *Flavobacterium* sp.

Seq: **UoP Ref: 28w1 Clone 4**

ATTACCGCGGCTTGTGGCACGGAGTTAGCCGATCCTTATTCTTACGATACCGTCAAGCTCCTTC
ACGAAGGAGTGTTCCTTCTCGTATAAAAGCAGTTTACAATCCATAGGACCGTCATCCTGCACGCG
GCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCCTCA

Clone 5 closely resembled: *Helicobacter* sp., *Wolinella succinogenes*, *Helicobacter muridarum*

Seq: **UoP Ref: 28w1 Clone 5**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGGGCTTACTCTGAAGGTACAATCAATACTCGATA
AATCGTGTATATTTTTCCCTCTTACAGAAGTTTACAAGAAAAATCCCTTCATCCTTCACGCGGCG
TTGCTGCTTCAGCCTTTCGGCCATTGAGCAATATTCCTTA

UoP Ref: 85W1

BACPOLES Ref: 1.a.td.1

Clone 1 closely resembled: *Acinetobacter* sp., *Acinetobacter lwoffii*

Seq: **UoP Ref: GW1(85W1) Clone 1**

ATTACCGCGGCTGCTGGCACAGAGTTAGCCGGTGCTTATTCTGCGAGTAACGTCCACTACTCCTG
AGTATTAATCAGGGTAGCCTCCTCCTCGCTTAAAGTGCTTTACAACCAAAGGCCTTCTTCACACA
CGCGGCATGGCTGGATCAGGGTTGCCCCATTGTCCAATATTCCTCA

UoP Ref: 19W1

BACPOLES Ref: 1.d.td.3.340

Clone 8₂ closely resembled: *Flavobacterium* sp., Antarctic bacterium, *Cytophaga* sp.

Seq: **UoP Ref: 19w1 Clone 8₂**

CGGCTACCTTGTTACGACTTAGCCCTAGTTACCAGTTTTACCCTAGGCAGCTCCTTGCGGTCACC
GACTTCAGGTACCCCGAGCTTCCATGGCTTGACGGGCGGTGTGTACAAGGCCCGGGAACGTATT
CACCGGATCATGGCTGATATCCGATTACTAGCGATTCCAGCTTCACGGAGTCGAGTTGCAGACTC
CGATCCGAAGTGAACCGTTTTATAGATTGCTCCTTATTGCTAAGTGGCTGCTCTCTGTACCGT
CCATTGTAGCACGTGTGTGGCCAGGACGTAAGGGCCGTGATGATTTGACGTCATCCCCACCTT
CCTCACAGTTTACACTGGCAGTCTTGCTAGAGTTCCACCATACGTGCTGGCAACTAACACAG
GGTTGCGCTCGTTATAGGACTTAACCTGACACCTCACGGCACGAGCTGACGACAACCATGCAG
CACCTTGTAATTTGCTTGCAGAAAGATCTGTTTCAAATCGGTCAAACACTAATTTAAGCCCTGGTA
AGGTTCTCGCGTATCATCGAATTAACACATGCTCCACCGCTTGTGCGGGCCCCCGTCAATTC
CTTTGAGTTTCAGGCTTGCGCCGTACTCCCCAGGTGGGATACTTATCACTTTTCGCTTAGCCACT
CAGAATTGCTCCCGAACAGCTAGTATCCATCGTTTACGGCGTGGACTACCAGGGTATCTAATCCT
GTTGCTACCCACGCTTTCGTCATCAGCGTCAATCGTTTGTAGTAACCTGCCTTCGCAATTGGT
ATTCCATGTAATATCTAAGCATTTCACCGCTACACTACATATTCTAGTTACTTCACAAAAATTCAAG
CCTAACAGTATCAATGGCATTTCGTTTGGGTTAAGCCAAAAACTTTACCCGCTGACTTATTAAGGCCG
CCTACGGACCCTTTAAACCCAATGATTCCGATACGCTTGTATCCTCCGTATACCGCGGCTGCTGGC
ACGAGTAGCGATCTTTATTCTTACAGTACGTACGTTCCGACTTCGTCGGATGTTTCTTCTTGTACA
AAGCAGTACCACCATAGATGGCCTCATCTGACGCGCATGCTTGTCCAGCTGTCCATGACAAATTC
CTCATGGTTGCCTTCGTAAGAGTCTTGAATCCGG

UoP (Slu)Ref: 30W (A29 27)

BACPOLES Ref: 1b.d.t.3.310

Clone closely resembled: *Brevundimonas* sp., *Caulobacter* sp.

Seq: **UoP Ref: 30W (A29 27) Clone**

GCGGGCTCTNCGGGTACGGTCATTATCGTCCCCGGTGGAAGAATTTACAATCCCTAAGACCTTC
ATCATTACGCGGCATGGCTGCGTCAGGCTTTCGCCATTGCGCAAGATTCCCCACTGCTGCCT
CCCGTAGGCCCGCTGCATATGNNTNNGTAGGNCCCCAGTGCA

UoP (Slu)Ref: 30W (A29 10)

BACPOLES Ref: 1b.d.t.3.310

Clone closely resembled *Brevundimonas vesicularis*, *Caulobacter* sp

Seq: **UoP Ref: 30W (A29 10) Clone**

GGCTCTCTCGGGACGGTCATTATCGGTCCCCGGGGGAAAGAATTTACAATCCTAAGACCTT
CATCATTACGCGGCATGGCTGCGATCAGGCTTTCGCCATTGCGCAAGATTCCCCACTGCTGC
CTCCCGTAGGCCCCCGTGCA

UoP (Slu)Ref: 30W (A29 986)

BACPOLES Ref: 1b.d.t.3.310

Clone 8 closely resembled *Brevundimonas* sp., *Caulobacter* sp

Seq: **UoP Ref: 30W (A29 986) Clone 8**

TTACCGCGGCTGCTGGCAGAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTATCGTCCC
CGGTGAAAGAATTTACAATCCTAAGACCTTTCATCATTACGCGGCATGGCTGCGTCAGGCTTTC
GCCATTGCGCAAGATTCCCCACTGCTGCCTCCCGTAGGAAGGGCGAATTCCAGCACACTGGCG
GCCGTTACTAGTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTG
TGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGT

UoP (Slu)Ref: 28W (A27r1 1025)

Bacpoles Ref: 1ADT1 180

DGGE band A closely resembled *Flavobacterium* sp.

Seq: **UoP Ref: 28W (A27r1 1025) DGGE band A**

ACTTATCTNAGGTACCGGTCAAGANATTACACGGTAATGATTGTTTCTTCTTCTGCTGCTATAAAAAG
TTACAATCCATAGGGACCGGTCATCCTGCACGCGGCATGGCTGGATCAGGCTTGCGCCATTGT
CCAATATTCTCACTGCTGCCTCCCGTAGGCCCCCGTGCAA

DGGE band B closely resembled *Flavobacterium* sp

Seq: **UoP Ref: 28W (A27r1 1025) DGGE band B**

ACTTATCTNNGGANCGGTCAAGCATCGGGACACGGTCCGGAGATGATTTCTTCTGCTATAAAAAG
CAGTTTTACAATCCATAGGCACCGTCATCCTGCACGCGGCATGGCTGGTTCAGACTTGCATCCA
TTGACCAATATTCTCACTGCTGCNTCCCGTAGGCCCCCGTGCAA

DGGE band D closely resembled: *Brevundimonas* sp., *Phenylobacterium* sp., *Caulobacter* sp

Seq: **UoP Ref: 28W (A27r1 1025) DGGE band D**

GCTNTCTCNGGNACGGGTCATTATCGATCCCNGGATGANAGAATTTACAATNCNTAANACCTTC
NTNATTCACGCGGGCATGGNTGCGCTGAGGCGTTTCGATGCATTGGNCAAGATTNNCCACTGNT
GCCTCNCNTACGNCNCNGGTGCATCCCGTAGGCCCCCGTGCAA

DGGE band E closely resembled *Brevundimonas* sp., *Caulobacter* sp

Seq: **UoP Ref: 28W (A27r1 1025) DGGE band E**

CTCTCGGGTACGGTCATTATCGTCCCCGNGGTGGAAAGAATTTACAATCCTAAGACCTTCATCA
TTCACGCGGCATGGCTGCGTCAGGCTTTCGCCATTGCGCAAGATTCCCCACTGCTGCCTCCCG
TAGGCCCCCGTGATCTGCGTAGGCCNCCCGTGCAAAGGAA

UoP (Slu)Ref: A301

Bacpoles Ref: location unknown

DGGE band A closely resembled *Rhizobium galegae*, *Rhizobium* sp., *Agrobacterium* sp.

Seq: **UoP Ref: A301 DGGE band A**

CTCTCGGAACGTCAATTATCTTCTCCGGTAAAGAGCTTTACAATCCTAAGACCTTCATCACTCAGC
CGGCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCCCCACTGCTGCCTCCCGTAGGCC
CCCCGTGCAAAA

DGGE band B closely resembled *Rhizobium galegae*, *Rhizobium* sp., *Agrobacterium* sp

Seq: **UoP Ref: A301 DGGE band B**

GCTCTCTCGGAACGGTCATTATCTTCTCCGGGGAAAGAGCTTTACAATCCTAAGACCTTCATCA
CTCACGCGGCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCCCCACTGCTGCCTCCCG
TAGGCCCCCGTGCAAAA

DGGE band C closely resembled *Brevundimonas vesicularis*, *Brevundimonas* sp., *Caulobacter* sp

Seq: **UoP Ref: A301 DGGE band C**

CTTCTNTCGGGATACGGTCATTATCGTCTCCGGGGGAAAGAATTTTACAATCCTAAGACCTTCATC
ATTCACGCGGCATGGCTGNATCAGGCTTTGCCCCATTGCGCAAGATTCCCCACTGCTGCCTCCC
GTAGGCCCCCCGTGCAAAAAAAAAA

Site 2 : Dordrecht, Netherlands – Spruce of c. 75 yrs

UoP Ref: 51W1

BACPOLES Ref:2.td.1.0-620 (Netherlands)

Clone 1 closely resembled: *Agrobacterium tumefaciens*, *Rhizobium* sp., *Rhizobium loessense*,
Azotobacter chroococcum, *Reichenowia ornatae*, *Sinorhizobium* sp.

Seq: **UoP Ref: 51W1 Clone 1**

ATTACCGCCGTGTCTGCTGGCAGCAAGTTAGCCGGGGCTTCTTCTCCGGATACCGTCATTATCTT
CTCCGGTGAAAGAGCTTTACAACCCTAAGGCCTTCATCACTCACGCGGCATGGCTGGATCAGGC
TTGCGCCATTGTCCAATATTCCCA

Clone 2 closely resembled: *Oxalobacter* sp., *Matsuebacter* sp., *Zoogloea* sp., *Massilia* sp., *Massilia*
timonae, *Herbaspirillum* sp., *Janthinobacterium agaricidamnoso*.

Seq: **UoP Ref: 51W1 Clone 2**

ATTACCGCGTGCTGCTGGCAGTAGTTAGCCGGTGCTTATTCTTCAGGTACCGTCATTAGCCAG
GATATTAGCCTGAACCGTTTCTTCCCTGACAAAAGAGCTTTACAACCCGAAGGCCTTCTTCACTCA
CGCGGCATTGCTGGATCAGGCTTGCGCCATTGTCCAAAATTCCCA

Clone 4 closely resembled: *Massilia* sp., *Herbaspirillum seropedicae*, Uncultured beta
proteobacterium, *Zoogloea* sp., *Duganella zoogloeoidea*, *Matsuebacter* sp., *Oxalobacter* sp.

Seq: **UoP Ref: 51W1 Clone 4**

ATTACCGCGGCTGCTGGCAGTAGTTAGCCGGTGCTTATTCTTCAGGTACCGTCATTAGATCTGG
ATATTAGCCAAACCCGTTTCTTCCCTGACAAAAGAGCTTTACAACCCGAAGGCCTTCTTCACTCAC
GCGGCATTGCTGGATCAGGCTTGCGCCATTGTCCAAAATTCCCA

UoP Ref: 80W1

BACPOLES Ref: 2.td.7 140

Clone 1 closely resembled: *Rhodobacter sphaeroides*, *Paracoccus* sp., *Paracoccus yeeii*

Seq: **UoP Ref:80W1 Clone 1**

CACGGAGTTAGCCGGGGCTTCTTCTGCTGGTACCGTCATTATCTTCCCAGCTGAAAGGACTTTAC
AACCTAAGGCCTTCATCGTCCACGCGGCATGGCTAGATCAGGCTTGCGCCATTGTCTAAGATT
CCCCACTGCTGCCTCCCGTAGGCCCCCCGTGCCCGCCCGCCCGCCGCGCGCGGGCGGCG
AAGGGCGAATTCTGCAGATATCCATCACACTGGCGGCCGCTCGAGCATGCATCTAGAGGGCCCA
ATTGCCCCATAGTGAGTTCGTATTACAATTCATCTGGCCGTCGTTTTACAACGCTAGTGACTGG

Clone 3 closely resembled: *Rhodobacter sphaeroides*, *Paracoccus yeeii*, *Paracoccus aminophilus*,
Paracoccus marcusii, *Catellatibacterium nectarophilum*

Seq: **UoP Ref:80W1 Clone 3**

ATTACCGCGGCTGCTGGCAGGAGTTAGCCGGGGCTTCTTCTGCTGGTACCGTCATTATCTTCC
CAGCTGAAAGGACTTTACAACCCTAAGGCCTTCATCGTCCACGCGGCATGGCTAGATCAGGCTT
GCGCCATTGTCTAAGATTCCCA

Clone 4 closely resembled: *Clostridium paradoxum*

Seq: **UoP Ref:80W1 Clone 4**

ATTCCGGCGGCTACTGGCAAGGAGTTATCAGTCCAAAAGTATAGGAACCATGTCCTTCCTCATCT
CCCCAAAAGCACTTTACGACCCGAAGGCCTTCATCGTGCACGCGGCGTTGCTGCATCAGGCTT
TCGCCATTGTGCAATATTCCCTA

Clone 5 closely resembled: *Pseudomonas denitrificans*, *Saccharospirillum impatiens*, *Alteromonas* sp.,
Shewanella putrefaciens, *Alteromonas macleodii*, *Psychromonas* sp.

Seq: **UoP Ref:80W1 Clone 5**

ATTACCGCGGCTGCTGGCAGAGTTAGCCGGTGCTTATTCTGTCCGGTACCGTCAAAGATATCG
GTTATTAACCAACACCCCTTCTTCCCAACCTAAAGTGCTTTACAACCCGAAGGCCTTCTTACACA
CGCGGCATCGCTGGATCAGGGTTGCCCCATTGTCCAATATTCCCA

UoP Ref: 57W1

BACPOLES Ref: 2.td.11.0-650

Clone 2₁ closely resembled: Arctic sea ice bacterium, Comamonas sp., Cytophaga sp., Uncultured Flavobacterium sp., Pseudomonas sp., Muricauda sp., Polaribacter sp., Uncultured Bacteroidetes bacterium, Porphyromonas sp., Prevotella sp., Capnocytophaga sp., Rhodovirga sp., Cellulophaga sp.
Seq: **UoP Ref: 57W1 Clone 2₁**

ATGGTTTGCATCCTGGCTCAGTCGTAACAAGGTAGCCGA

Clone 2₆ closely resembled: Pseudomonas sp., Arctic sea ice bacterium, Cytophaga sp., Wolinella sp., Streptomyces sp., Nocardia sp., Acidithiobacillus sp., Paenibacillus sp., Bradyrhizobium sp., Corynebacterium sp., Devosia sp., Methanococcus sp., Rhodopseudomonas sp., Brachymonas sp., Cellulophaga sp.

Seq: **UoP Ref: 57W1 Clone 2₆**

ATGGTTTGACTCCTTGGCTCAAACAGTCGTAACAAGGTAGCCGA

UoP Ref: 52W1

BACPOLES Ref: 2.td.2 400-840

Clone 6₁ closely resembled: *Stentrophomonas* sp., *Pseudomonas* sp., *Xanthomonas* sp.

Seq: **UoP Ref: 52W1 Clone 6₁**

ATGGTTTGCATCCTGGCTCAGAGTGAACGCTGGCGGTAGGCCTAACACATACAAGTCGAACGGCA
GCACAGTAAGAGCTTGTCTTACGGGTGGCGAGTGGCGGACGGGTGAGGAATACATCGGAATCT
ACTCTGTCTGGGGGATAACGTAGGGAACTTACGCTAATACCGCATAACGACCTACGGGTGAAA
GCAGGGGATCTTCGGACCTTGC GCGATTGAATGAGCCGATGTCGGATTAGCTAGTTGGCGGGGT
AAAGGCCACCAAGGCGACGATCCGTAGCTGGTCTGAGAGGATGATCAGCCACACTGGAAGTGA
GACACGGTCCAGACTCCTACGGGAGGCAGCAGTGGGAATATTGGACAATGGGCGCAAGCCTG
ATCCAGCCATACCGCGTGGGTGAAGAAGGCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAA
ATCCAGCCGGCTAATACCTGGTTGGGATGACGGTACCCAAAGAATAAGCACC GGCTA ACTTCGT
GCCAGCAGCCGCGGTAATACGAAGGGTGCAAGCGTTACTCGGAATTACTGGGCGTAAAGCGTGC
GTAGGTGGTCTGTTAAGTCCGTTGTGAAAGCCCTGGGCTCAACCTGGGAAGTGCAGTGGATACT
GGTGGGACTAGAGTGTGGTAGAGGGTAGCGGAATTCCTGGTGTAGCAGTGAATGCGTAGAGAT
CAGGAGGAACATCCATGGCGAAGGCAGCTACCTGGACCAACACTGACACTGAGGCACGAAAGC
GTGGGGAGCAAACAGGATTAGATACCCTGGGTAGTCCACGCCCTAAACGATGCCAACTGGATGT
TGGGTGCAATTTGGCACGCAGTATCGAAGCTAACGCGTTAGTTCGCCGCCTGGGGAGTACGGTC
GCAGACTGAAACTCAAGGATTGACGGGGTGCACAGCGGTGGAGTATGGTGGTTTATTTCGATG
CACGGCGAGGAC

Clone 6₅ closely resembled: *Kocuria rosea*, *Pseudomonas* sp., *Halomonas* sp., Arctic sea ice bacterium, *Cytophaga* sp., *Streptomyces* sp., *Nocardia* sp., *Acidithiobacillus* sp., *Campylobacter* sp., *Paenibacillus* sp., *Bradyrhizobium* sp., *Corynebacterium* sp., *Devosia* sp., *Methanococcus* sp., *Rhodopseudomonas* sp., *Brachymonas* sp., *Gluconacetobacter* sp., *Geobacillus* sp., *Bacillus* sp., *Cellulophaga* sp.

Seq: **UoP Ref: 57W1 Clone 6₅**

ATGGTTTGCATCCTGGCTCAACTATAGTCGTAACAAGGTAGCCGA

UoP Ref: 53W1

BACPOLES Ref: 2.td.3.400-850

Clone 5₁ closely resembled: Uncultured beta proteobacterium, *Halomonas* sp., *Kocuria rosea*, *Pseudomonas* sp., Arctic sea ice bacterium, *Cytophaga* sp., *Streptomyces* sp., *Nocardia* sp., *Acidithiobacillus* sp., *Paenibacillus* sp., *Bradyrhizobium* sp., *Corynebacterium* sp., *Devosia* sp., *Methanococcus* sp., *Rhodopseudomonas* sp., *Brachymonas* sp., *Geobacillus* sp., *Desulfobacterium* sp., *Bacillus* sp., *Variovorax* sp., *Acidovorax* sp., *Devosia* sp., *Phyllobacterium* sp.

Seq: **UoP Ref: 53W1 Clone 5₁**

ATGGTTTGCATCCTGGCTCAAACAGTCGTAACAAGGTAGCCGA

Clone 25₁ closely resembled: *Pseudomonas* sp., *Azotobacter* sp., *Rhodococcus* sp.

Seq: **UoP Ref: 53W1 Clone 25₁**

ATTACCGCGCTGCTGGCACGAAGTTAGCCGGTGCTTATTCTGTTGGTAACGTCAAAACTGCAG
GGTATTAACCAGCAGCCCTTCTCCCAACTTAAAGTGCTTTACAATCCGAAGACCTTCTTCACACA

UoP (Slu)Ref: 52W (A86)

BACPOLES Ref: 2.td.2.400-840

Clone closely resembled *Bacillus fumarioli*, *Bacillus* sp.

Seq: **UoP Ref: 52W (A86) Clone 1**

CAAATGGGGGCTTTCTGGGTTGGTACAGTCAAGGTACCGGCAGTTACTCCGGTACTTGTCTTC
CCTAACAAACAGAGCTTTACGACCCGAAGGCCCTTCATCGCTCACGCGGCGTTGCTCCATCAGACTT
TCGTCCATTGTGGAAGATTCCCTACTGCTGCCTCCCGTAGGCCCCCGTGCAA

UoP (Slu)Ref: 54W (A87a)

BACPOLES Ref: 2.td.8.0-700

Clone 3 closely resembled *Brevundimonas* sp., *Caulobacter* sp., *Phenyllobacterium* sp.

Seq: **UoP Ref: 54W (A87a) Clone 3**

CACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTATCGTCCCCGGTGAAAGAATTTTAC
AATCCTAAGACCTTCATCATTACGCGGCATGGCTGCGTCAGGCTTTCGCCATTGCGCAAGATT
CCCTACTGCTGCCTCCCGTAGGAAGGGCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGATC
CGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCG
CTCACAAATCCACACAACATACGAGCCGGAAGCATAA

Clone 6 closely resembled *Sphingomonas* sp., *Zymomonas* sp.

Seq: **UoP Ref: 54W (A87a) Clone 6**

CACGGAGTTAGCCGGAGCTTATTCTCCCGGTACTGTCATTATCATCCCGGGTAAAAGAGCTTTAC
AACCCGAAGGCCCTTCATCACTCACGCGGCATTGCTGGATCAGGGTTTCCCCATTGTCCAATATT
CCCCACTGCTGCCTCCCGTAGGAAGGGCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGATC
CGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCG
CTCACAAATCCACACAACATACGAGCCGGAAGCATAAAG

UoP Ref: 75W

BACPOLES Ref: 21ta3@3

DGGE band A closely resembled: *Rhodobacter* sp., *Paracoccus* sp.,

Seq: **UoP Ref: 75W DGGE band A**

GCTCTCGCTGGTACGGTCATTATCTTCCCAGCNTGAAAAGGACTTTACAACCCTAAGGCCTTCAT
CGTCCACGCGGCATGGCTAGATCAGGCTTGCGCCATTGTCTAAGATTCCCCACTGCTGCCTCC
CGTAGGCCCCCGTGCAGA

Site 4 : Haarlem, Netherlands, Scots Pine c. 100 years old

UoP Ref: 101W

BACPOLES Ref:4.te.5.0.00-0.50

DGGE band C most closely resembled *Acinetobacter* sp., *Mycobacterium* sp.

Seq: **UoP Ref: 101W DGGE band C**

CGGCTNCTNNGGTACGTCATTATCTCNNTATAGNNGNCCNNGCTTTCTTAACNGGACAANATAA
CTTNACNANCCNGANGGGCTTCNTNCTGCNCGACGGNNGTGTGGATTAGGCTTNGNNGCNTTG
TCNAAAATCCNCAGTGCTGCCTCCNGTAGGCCCNCAAGTGCAA

DGGE band E most closely resembled *Oxalobacter* sp., *Herbaspirillum* sp., *Massilia* sp., *Zoogloea* sp., *Nitrosomonas* sp.

Seq: **UoP Ref: 101W DGGE band E**

GCTTATCTTNGGTACGGTCATTATCCCGANGATANTANCGNCCANCGTNTTTCTTACC GGACA
AAANANACTTTACAACCNGAAGGNCTTCNTCACTGCACGACGGNANTGCTGGATNAGGCTTNGC
NGCATTGTCCAAAATCCNCAGTGCTGCCTCCCGTAGGCCCNCAAGTGCAA

DGGE band F most closely resembles *Oxalobacter* sp., *Janthinobacterium* sp., *Herbaspirillum* sp.

Seq: **UoP Ref: 101W DGGE band F**

GNGGCTNTCTTNGGTACGGTCATTAGCAGNAGATATTAGCNCCACCGTTTTCTTCCCTGGACAA
AANAGCTTTACAACCCGAAGGCCCTTCTCACTCACGCGGCATTGCTGGATCAGGCTTGCGCCAT
TGTCCAAAATCCCCACTGCTGCCTCCCGTAGGCCCCCGTGCAA

DGGE band H most closely resembles *Acidovorax* sp., *Comamonas* sp., *Hylemonella*

Seq: **UoP Ref: 101W DGGE band H**

GCTATCTNGGTACGGTCATGGTCCCGGGTATTATCCNGAACTTTTCGTTCCGTACAAAAGCAG
TTTACAACCCGAAGGNCTTCATCCTGCACGCGGCATTGCTGGATCAGGCTTTCGCCATTGTCCA
AAATTCCTCCACTNCTGCCTCCCGTAGGCCCCCNNGTGCAA

DGGE band K most closely resembles *Brevundimonas vesicularis*, *Brevundimonas* sp., *Caulobacter* sp.,

Seq: **UoP Ref: 101W DGGE band K**

GGCTATCTCGGGTACGTCAATTATCGTCCCCGGATGAAAGAATTTTACAATCCTAAGACCTTCATCA
TTCACGCGGCATGGCTGCGTCAGGCTTTCGCCATTGNGCANGATTCCCCACTGCTGCCTCNCG
TANGNCCCCCGATGCACATGCCTCCCGTAGGCCCCCNNGTGCAA

DGGE band L most closely resembles *Coccomonas* sp., *Pseudomonas* sp.

Seq: **UoP Ref: 101W DGGE band L**

GGCGGGCTNTCTNGGTACGGTCATGGGCCCCGCCGTATTAGGGCAGACCTTTTCGTTCCGTACA
AAAGCAGTTTACAACCCGAAGGCCTTCTTCCTGCACGCGGCATTGCTGGATCAGGCTTTCGCCCA
TTGTCCAAAATTCCTCCACTGCTGCCTCCCGTAGGCCCCCNNGTGCAA

UoP (Slu)Ref: A51 (A51 27)

BACPOLES Ref: unknown location

Clone most closely resembles *Acidovorax* sp.,

Seq: **UoP Ref: A51 27 Clone**

CTTCTAGGTACGTCAATGGACCCCTTTATTAGAAGGAGTCTTTTCGTTCCGTACAAAAGCAGTTTA
CAACCCGAAGGCCTTCATCCTGCACGCGGCATGGCTGGATCAGGCTTTCGCCCAATTGTCCAAAA
TTCCCTCCACTGCTGCCTCCCGTAGGCCCCCNNGTGCAA

Site 5 : Rotterdam, Netherlands – Silver Fir and Spruce of unknown age

UoP Ref:67W1

BACPOLES Ref: 5.te.2. 50

Clone 3 closely resembled: *Zymobacter palmae*, *Pseudomonas cellulose*, *Alishewanella fetalis*,
Halomonas sp., *Halomonas salina*.

Seq: **UoP Ref:67W1 Clone 3**

TCACGTAGTAGGTGAATGCCTTCTCCCCGCTGAAAGTGCTTTACAACCCTAAGGCCTTCTTCAC
ACACGCGGCATGGCTGGATCAGGCTTTCGCCATTGTCCAATATTCCCCAA

Clone 4 closely resembled: *Pseudomonas* sp.

Seq: **UoP Ref:67W1 Clone 4**

ATTACGCGTGCTGCTGGCACAGAGTTAGCCGGTGCTTATTCTGTTCGGTAACGTCAAAAACAGCAA
AGTATTAATTTACTGCCCTTCTCCCAACTTAAAGTGCTTTACAATCCGAAGACCTTCTTCACACAC
GCGGCATGGCTGGATCAGGCTTTCGCCATTGTCCAATATTCCCCA

Clone 5 closely resembled: unidentified bacteria

Seq: **UoP Ref:67W1 Clone 5**

ATTCCCGCGTTGTTGGCAAGTAGTTAGCCGAGACTTATTCTGGGGATACTGTCCTTCTCATCT
CCCCAAAAGCACTTTACGACCCGAAGGCCTTCATCGTGCACGCGGCGTTGCTGCATCAGGCTT
TCGCCATTGTGCAATATTCCCTA

UoP Ref: 62W2

BACPOLES Ref: 5te1

Clone most closely resembled *Pseudomonas* sp.,

Seq: **UoP Ref: 62W2 clone**

GCTATCTGTGGTACGTCAAAGTGCAGGGTTATTAACCAGCAGCCCTTCTCCAACTTAAAGTGC
TTTACAATCCGAAGACCTTCTTCACACACGCGGCATGGCTGGATCAGGCTTTCGCCATTGTCCA
ATATTCCCTCCACTGCTGCCTCCCGTAGGCCCCCNNGTGCAA

DGGE band B most closely resembled *Pseudomonas* sp.,

Seq: **UoP Ref: 62W2 DGGE band B**

TNTCTGTGGTACGTCAAACAATCACGGTATTAGGTAAGTCCCTTCCCTCCCAACTTAAAGTGCTT
TACAATCCGAAGACCTTCTTACACACGCGGCATGGCTGGATCAGGCTTTTCGCCATTGTCCAAT
ATTCCCCTACTGCTGCCTCCCGTAGGCCCCCGTGCAANNNNNNNNNNNTNTNTNATATNANNAA
NAANATNNAANNANNNTATNGAANATNAAANTGGNNNNNAAAANNNGNNNNNAAATGATNAAATA
ANGNANNGANATNAAANAATAAANTNNNNTTNGNAAAANNATAAAATGNTNNNANGAANAAGANN
NTNANAANANNANNNTTANNAATNATTNTAAGNNCNTNNAANANAAANNNGGGANNAAAAT
AGTNTANNNNNNNAAAANTNANATTACNANTNCNTNAANTNNAATTNAAATNANNNNNAANTTATN
TAACTANATNGNAAAANAANTANNNA TNNTNNANTTNNANTNAAANNANAAATANAANATTTAGNAAN
NNNATTATNTNAATAATNNNNNATTAANTANTATAANNAAAANNNNANNNNNAANNNNNNNAAGNNTN
NATNAAAANNNATNNTATNTAAAAATANAAAAAATNAAANNNANAANNNGGTNNAANNAANGANN
AAAANANNANAAAAAAGNATANATANNNTTAAATNAANGNNTAANNNTAATAANATTANAANNNA
ATNNAANNNGAAANNATANAANNAANTAANNAATNNAAGTAGATAAATATTNGTTACTNAGTAT
ATTAATTANATTANNNAANAAGNTAATATNTANANATANANAAAAGTNGNANNATTTAAANNNATNA
NNAAATAACACNTNGTAATANANAATAANNATTANNNTANNAAAAAGATTANNAATANTTATNAATN
ANCAANANANNAAAAATAANNAATCNTNAAAATTANANATNTATNTTTAAATNATANTTANNNTTN
AAAANNAGTAGTANGGNNNNNGAAANTNAGTGTAATANGANTNAGNAANNNNAAAAAATAAN
ANAAAANAAAANTAAAANANANNAANATNTTTTAAANAATATGAGTAANTANANTNNAATNAAAACAAA
AAAANAAAAAATAATTNGNGTTATAATNNNAAAGNCANCAATNAAGANATATTNACTANANAAA
NCTNAAANTTNTAANTATAGTTANNTTGATNAGTNGAATATATTTTNTAATTAANAANANNTTANA
NNAATATNTANNNATAANAAGNTATNTNTAANNATNGTTATTNAANAANNAATNNAANGTTGAAN
NATATTAANANACTAAGAANNAATAAANNTAAAANAANNACACNAAAANAATTATTNAATANANTNA
TAGTANAAAANNAAATTNANANNAANANAAAATATATATNAAANNNNATNAGCNANNANANANAAT
CANANNNAATAGTATGAATANTNCNNGACNATTTAGNNNTTNTATACNAAATCAANANTNCNAGANT
AA

UoP (Slu)Ref: A93 (A93 994A)

BACPOLES Ref: 5te11040

Clone 5 most resembled *Pseudomonas* sp.

Seq: **UoP Ref: A93 994A Clone 5**

GAACCTCATTTTAGGGGCGATTGGGCCCTCTAGATGCATGCTCGAGCGGCCGCCAGTGTGATGG
ATATCTGCAGAATTCGCCCTTCTACGGGAGGCAGCAG

UoP (Slu)Ref: A93 (A93 994)

BACPOLES Ref: 5te11040

DGGE band B resembles: uncultured beta proteo-bacterium, *Acidovorax* sp., *Variovorax paradoxus*,

Seq: **UoP Ref: A93 994 DGGE band B**

ATNACTCCCTGNTATTANAGAAANGNTTTTCGTTCCGATACNNNANCANTTTACAACCCNAAGGG
CTTCATGCTGTCACGCGCGANNGGCTGGATNANGCTTGGGNCCATTGTCCAAAATTCCTCCACTN
CTGCCTCCCGTAGGCCCCCGTGCAA

Site 6 : Koog ald Zaan, Netherlands –Scot's Pine of c. 70yrs

UoP Ref: 63W1

BACPOLES Ref: 6.te.1 0-500 (Netherlands)

Clone 3 closely resembled: *Sphingomonas* sp., *Porphyrobacter cryptus*, *Sphingomonas herbicidovorans*.

Seq: **UoP Ref: 63W1 Clone 3**

ATTACCGCCGGCTGCTGGCACGGAGTTAGCCGGGGCTTATTCTCCCGGTACTGTCATTATCATCC
CGGGTAAAAGAGCTTTACAACCCTAAGGCCTTCATCACTCACGCGGCATTGCTGGATCAGGCTTT
CGCCATTGTCCAATATTCCCA

Clone 5 closely resembled: *Sphingomonas* sp., *Novosphingobium* sp., *Sphingomonas stygialis*, *Sphingomonas aromaticivorans*, *Sphingomonas aromaticivorans*, *Sphingomonas capsulata*, *Sphingomonas subterranea*

Seq: **UoP Ref: 63W1 Clone 5**

ATTACCGCGTGTCTGCTGGCACGGAGTTAGCCGGAGCTTATTCTCCAGGTACTGTCATTATCATC
CCTGGTAAAAGAGCTTTACGACCCGAGGGCCTTCATCACTCACGCGGCATTGCTGGATCAGGCT
TTCGCCATTATCCAATATTCCCA

UoP (Slu)Ref: 63W1 (A118A)

Clone 8 most resembled *Chryseobacterium* sp., *Flavobacterium* sp., *Riemerella* sp.,

Seq: UoP (Slu)Ref: 63W1 (A118A) Clone 8

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGTGCTTATTCGTATAGTACCTTCAGCTACCCTCA
CGAGGGTAGGTTTATCCCTATACAAAAGAAGTTTACAACCCATAGGGCAGTCGTCCTTCACGCGG
GATGGCTGGTTACAGGCTTGCACCCATTGACCAATATTCCTCACTGCTGCCTCCCGTAGGCCCCC
CGTGCAAGGGCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGATCCGAGCTCGGTACCAAGC
TTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCC

UoP (Slu)Ref: 63W1 (A115B)

BACPOLES Ref: 6.te.3200-2500

Clone 4 closely resembled: *Brevundimonas* Sp., *Caulobacter* sp.

Seq: UoP (Slu)Ref: 63W1 (A115B) Clone 4

ATTACCGCGGCTGCTGGCACGAAGTTAGCCGGGGCTTCTTCTCCGGGTACCGTCATTATCGTCC
CCGGTGAAAGAATTTTACAATCCTAAGACCTTCATCATTACGCGGCATGGCTGCGTCAGGCTTT
CGCCCATTGCGCAAGATTCCCTACTGCTGCCTCCCGTAGGCCCCCCCGTGCAAGGGCGAATTCCA
GCACACTGGCGGCCGTTACTAGTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCAT
AGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCC

UoP (Slu)Ref: 63W1 (A110)

BACPOLES Ref: 6.te.3200-2500

Clone 1 closely resembled *Pseudomonas* sp.,

Seq: UoP (Slu)Ref: 63W1 (A110) Clone 1

CACGAAGTTAGCCGGTGCTTATTCTGTTGGTAACGTCAAACTGCAGGGTATTAACCAGCAGCCC
TTCTCCCAACTTAAAGTGCTTTACAATCCGAAGACCTTCTTCACACACGCGGCATGGCTGGATC
AGGCTTTGCGCCATTGTCCAATATCCCCACTGCTGCCTCCCGTAGGAAGGGCGAATTCCAGCAC
ACTGGCGGCCGTTACTAGTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCATAGCT
GTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAAC

UoP Ref: 65W1

BACPOLES Ref: 6.te.2.0-500

DGGE band A closely resembled *Cytophaga* sp., *Flavobacterium* sp.,

Seq: UoP Ref: 65W1 DGGE band A

ANTNNNANAANNNNNNANNTCCCTTACGAAGAGTGTTCCTTCTCGTATAAAAGCAGTTTACAATCCAT
AGGACCGTCATCCTGCACGCGGCATGGCTGGATCAGGCTTGCGCCCATTTGCCAATATTCCTCA
CTGCTGCCTCCCGTAGGCCCCCGTGCAANGAANNNNNNNNNNNNNNNNANNGNNANNGNTNNNN
NANNA

Site 7 : Haarlem, Netherlands – Poplar of unknown age

UoP Ref: 71W1

BACPOLES Ref: 7.te.4.300-500

Clone 3₉ closely resembled: *Pseudomonas* sp., Arctic sea ice bacterium, *Cytophaga* sp.,
Streptomyces sp., *Nocardia* sp., *Acidithiobacillus* sp., *Campylobacter* sp., *Paenibacillus* sp.,
Bradyrhizobium sp., *Corynebacterium* sp., *Devosia* sp., *Methanococcus* sp., *Rhodopseudomonas* sp.,
Brachymonas sp., *Cellulophaga* sp.

Seq: UoP Ref: 71W1 Clone 3₉ ATGGTTTGTCTTGGCTCAACTATAGTCGTAACAAGGTAGCCGA

Clone 3₁₀ closely resembled: *Oxalobacter* sp., *Janthinobacterium* sp., *Pseudomonas* sp., *Massilia* sp.,
Duganella sp., *Ultramicrobacterium* str., *Aquaspirillum* sp., *Herbaspirillum* sp.

Seq: UoP Ref: 71W1 Clone 3₁₀

GATTGAACGCTGGCGGCATGCTTTACACATGCAAGTCGAACGGCAGCGCGGGGCAACCTGGCG
GCGAGTGGCGAACGGGTGAGTAATATATCGGAACGTACCCAAGAGTGGGGGATAACGTAGCGAA
AGTTACGCTAATACCGCATACGATCTAAGGATGAAAGCAGGGGACCGCAAGGCCTTGTGCTCCT

GGAGCGGCCGATATCTGATTAGCTAGTTGGTAGGGTAAAGGCCTACCAAGGCTACGATCAGTAG
CTGGTCTGAGAGGACGACCAGCCACACTGGAAGTGGAGACACGGTCCAGACTCCTACGGGAGGC
AGCAGTGGGGAATTTTGGACAATGGGCGCAAGCCTGATCCAGCAATGCCGCGTGAGTGAAGAAG
GCCTTCGGGTTGTAAGCTCTTTTGTGAGGGAAGAAACGGTGGGGGCTAATATCCTCCACTAATG
ACGGTACCTGAAGAATAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTGC
AAGCGTTAATCGGAATTAAGTGGGCGTAAAGCGTGCCGAGGCGGTTTTGTAAGTCTGATGTGAAAT
CCCCGGGCTCAACCTGGGAATTGCATTGGAGACTGCAAGGCTAGAATCTGGCAGAGGGGGGTA
GAATTCACGTGTAGCAGTGAATGCGTAGAGATGTGGAGGAACACCGATGGCGAAGCAGCCCC
CTGGGTCAAGATTGACGCTCATGCACGAAAGCGTGGGGAGCAAACAGGATTAGATACTCTGGTA
GTCCACGCTCTAAACGATGTCTACTAGTTGTCGGGTTTTAATTAACCTGGTAACGCAGCTAACGC
GTGAAGTAGACCGCCTGGGGAGTACGGTGCAGATTAATAACTCAAAGGAATTGACGGGACCCGC
ACAGCGGTGATGATGTGGATTAATTCGATGCACGCGAAAACCTTACCTACCCTTGACATGTACGA
GCCACGAGAGATCGAGGTGTGCTCGAAGAAAATCGTACCAGTGTGCATGGCTGTGCTCAGCTC
CGTCTGGAATGTTGTTAGTTTCGCACGAGGCCAACTTGCCATAGTGCTACGAAGACCCCTTATGA
ACTGCGTACAACCCGGAAGAAAG

Clone 24₃ closely resembled: *Janthinobacterium* sp., *Massilia* sp., *Oxalobacter* sp., *Pseudomonas* sp., *Ultramicrobacterium* str., *Aquaspirillum* sp., *Variovorax* sp., *Alcaligenes* sp., *Lampropedia* sp.

Seq: **UoP Ref: 71W1 Clone 24₃**

CGGCTACCTCTGTTACGACTTCACCCAGTCACGAATCCTACCGTGGTAAGCGCCCTCCTTACGG
TTAAGCTACCTACTTCTGGTAAAACCCGCTCCCATGGTGTGACGGGCGGTGTGTACAAGACCCG
GGAACGTATTCACCGCGACATGCTGATCCGCGATTACTAGCGATTCCGACTTCACGCAGTCGAGT
TGCAGACTGCGATCCGGACTACGACTGGCTTTATGGGATTGGCTCCCCCTCGCGGGTTGGCAAC
CCTCTGTACCAGCCATTGTATGACGTGTGTAGCCCCACCTATAAGGGCCATGAGGACTTGACGTC
ATCCCCACCTTCTCCGTTTTGTACCGGCAGTCTCATTAGAGTGCCCAACTAAATGTAGCAACT
AATGACAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGACAG
CCATGCAGCACCTGTGTACTGGTTCTCTTTCGAGCACTTCCCAATCTCTCGGGAATTCAGCCAT
GTCAAGGGTAGGTAAGGTTTTTCGCGTTGCATCGAATTAATCCACATCATCCACCGCTTGTGCGG
GTCCCCGTCAATTCCTTTGAGTTTTAATCTTGCAGCCGACTCCCCAGGCGGTCTACTTCACGCG
TTAGCTGCGTTACCAAGTCAATTAAGACCCGACAACCTAGTAGACATCGTTTAGGGCGTGGACTAC
C

Clone 24₈ closely resembled: uncultured bacteria

Seq: **UoP Ref: 71W1 Clone 24₈**

AATTGAACGCTGGCGGTTGCCTTACGCCTGCTTCTGCAAATATCCATCGGAGCTTGCTCTGGTGG
CGAGTGGTCTCGGGTGAGTATTCATCCTATACGTACCCTGGAGTGGGGTATATGGCCGTCATTT
ACGCTAATAACCACTGGCAAACCCTGATGATACTGGGGGAATCGCCTTGTCATGCATCCCCCTTT
CCCGATATCTGATTAGCTAGTTGGTAGGGTAAAAGACTACCCTTGCCCTCATCAGCACCTGGTCT
GAGAGGAATGCCCGCCCCCTGGGAAGTACATTGCGCCCGGACTCCGAGGGGAGGACGCACTG
GGGAATTTTGGACCTTGGCCGCACCCCTGATCCCGCTCTGTCCCGTGTCTTCCCTTCGTTTCTCG
GTTGTAAGCTCTTTTTCCCGGAAGAACTGTGAGGGCTAATCTCTTTTGGTAATGAATGTACCG
GATTAATGAACCCCGGCTACCTACATGTTGATTACCGCGATGATACATATGGTGCAAGCTCTACT
CGAAATTAAGTCTCAACGCGTGCATGGAGTCTTGTAAAGTCTGATGTGAAACTCTTGGGCTC
AACCTGGGGAATTGCATTGCACACTGCTCGGTCTATAATCTGGCATAGGGAGGTAGAATTCACG
TGTAGCACTGTAGTGCATAGATATGTGTGAGGAACACCGATGGTGACGCAGCTCTCTGGGTCAA
GATTGACGCTCATGCTCCTAAGCGTGGCGAGCCACCAGGATTACATACCCTGATAGTCCACGCT
CACCACGATGTCTACTAGTTGCTGGTTTTATCTAACTTGGTAACGCAGCTAACGCGTGAGTAGA
CCGCTGGTGGTACGGTCTTCAATATTAATAACTCAAAGTAGTTGGCGGGACCCGCAAGCC
GAAGCATGATGTGATTTATGTGATGCCACCGCGTAAAGCCTTACCTACCCTTTGACATGACTG
ATCCTCTACAGATGACGAGTGCCTCGAAGACACCCGTACACAGTGTGCTGCATGACTGTGATCAGCT
CCGTCTTGGGAGAGTTGGCTAAGTCCCCTCACGACCCATCCTTGCCATATGTGCTACGAAGGTCA
CCTCTAATGGAAGTACCCAGGGTACAAAGCCGGCAAGACAAAGCGGGTGGAGGCAC

UoP Ref: 73W1

BACPOLES Ref: 7.te.6 430-600

Clone 4₃ closely resembled: *Aquaspirillum* sp., *Xylophilus* sp., *Pseudomonas* sp., *Variovorax* sp., *Comamonas* sp., Uncultured beta proteobacterium.

Seq: **UoP Ref: 71W1 Clone 4₃**

CGGCTACCTTCGTTACGACTTCACCCAGTCACGAACCCCGCGTGGTAAGCGCCCTCCTTGCG

GTTAGGCTACCTACTTCTGGCGAGACCCGCTCCCATGGTGTGACGGGCGGTGTGTACAAGACCC
GGGAACGTATTCACCGCGACATTCTGATCCGCGATTACTAGCGATTCCGACTTCACGCAGTCGAG
TTGCAGACTGCGATCCGGACTACGACTGGCTTTATAGGATTAGCTCCCCCTCGCGGGTTGGCAA
CCTTCTGTACCAGCCATTGTATGACGTGTGAGCCCCACCTATAAGGGCCATGAGGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCAGTCCCATAGAGTGCCCAACTAAATGTAGCAAC
TAATGGCAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGACA
GCCATGCAGCACCTGTGTTACGGTTCTTTTCGAGCACGAAACCATCTCTGGTAACTTCCGTACA
TGTCAAAGGTGGGTAAGGTTTTTCGCGTTGCATCGAATTAACCACATCATCCACCGCTTGTGCG
GGTCCCCGTCAATTCTTTGAGTTTCAACCTTGC GGCCGTA CTCCCAGGCGGTCAACTTCACGC
GTTAGCTTCGTTACTGAGTCAGTGAAGACCCAACAACCAGTTGACATCGTTTAGGGCGTGGACTA
CCAGGGTATCTAATCCTGTTTGTCCCCACGCTTTTCGTGCATGAGCGTCAGTACAGGTCACAGG
GATTGCCTTCGCGATCGGTGTTCTCCGATATCTACGCATTTCACTGCTACACGCGGAATTTCCA
TCCCCCTACCCGATCTAGCTATACAGTACACAATGCAGTTCCAGGTTGAGCCCCGGGATT
CACATCTGTCTTATATACCGCCTGCGCACGCTTTACGCCAGTATTCCGATTACGCTTGCACCCT
ACGTATTACGCGCTGCTGCACGTAGTAGCGGTGCTTATTCTACGTAACGTCATGTCCAGGTATT
ATCCGAGACTTCCGTCGTACAAAGCAGTTACACCGAGGCTCATCTGGACGCGCATGCCTGATCA
GCCTTCGCCATGGTTCCAATTC

Clone 4₇ closely resembled: *Janthinobacterium* sp., uncultured eubacterium, *Pseudomonas mephitica*, *Aquaspirillum* sp., *Herbaspirillum* sp., *Duganella* sp., *Massilia* sp., Arctic sea ice bacterium.
Seq: **UoP Ref: 71W1 Clone 4₇**

CGGCTACCTGTTACGACTTCACCCCAGTCACGAATCCTACCGTGGTAAGCGCCCTCCTTGCGGT
TAAGCTACCTACTTCTGGTAAAACCCGCTCCCATGGTGTGACGGGCGGTGTGTACAAGACCCGG
GAACGTATTCACCGCGACATGCTGATCCGCGATTACTAGCGATTCCAACCTTCATGCAGTCGAGTT
GCAGACTACAATCCGGACTACGATACACTTTCTGCGATTAGCTCCCCCTCGCGGGTTGGCGGCG
CTCTGTATGTACCATTGTATGACGTGTGAAGCCCTACCCATAAGGGCCATGAGGACTTGACGTCA
TCCCCACCTTCTCCGGTTTGTACCCGGCAGTCTCATTAGAGTGCCCTTTTCGTAGCAACTAATGA
CAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGACAGCCATG
CAGCACCTGTGACTGGTTCTTTTCGAGCACTCCCTGATCTCTCAAGGATTCCAGCCATGTCAA
GGGTAGGTAAGGTTTTTCGCGTTGCATCGAATTAATCCACATCATCCACCGCTTGTGCGGGTCCC
CGTCAATTCCTTTGAGTTTAACTTTCGCGACCGTACTCCCAGGCGGTCTACTTCACGCGTTAGCT
GCGTTACCAAGTCAATTAAGACCCGACAAGTACTAGTACATCGTTTAGGGCGTGGACTACCAGGGT
ATCTAATCCTGTTTGTCCCCACGCTTTTCGTGCATGAGCGTCAATCTTGACCCAGGGCTGCCTT
CGCCATCGGTGTTCTCCACATATCTACGCATTTCACTGCTACACGTGATTCTACCCCTCTGC
CAGATTCTAGCCTTGAGTCTCCAATGCAATTTCCAGGTTGAGCCCCGGGATTTTACATCAGACT
TACAAAACCGCCTGCGCACGCTTTACGCCAGTATTGATACGCTGCACCCTACGTATTACCGCGG
CTGCTGCACGTAGTAGCGTGCTTATTCTTACGTACGTCATAAGCAGAGAATTAGCTCTCACCGTT
CTTCTTGAACAAGAGCTTAACGCTGAGCCTCTCACTCACGCGCATGCTGGATCAGCCTTCGCCCA

UoP Ref: 64W

BACPOLES Ref: 7 te. 1. 500-750

Dgge band L most resembled: *Sphingomonas* sp.,

Seq: **UoP Ref: 64W DGGE band L**

GCTATCTCCGGGACGGTCAATTATCATCCCGGGATAAAAGAGCTTTACAACCCTAAGGCCTTCATC
ACTCACGCGGCATTGCTGGATCAGGCTTTGCCCCATTGTCCAATATTCCCCACTGCTGCCTCNCG
TAGGCCCCCCGTGCNAATGCCTNCGTAGGCCCGCAGTGCAA

DGGE band K most resembled: *Sphingomonas* sp

Seq: **UoP Ref: 64W DGGE band K**

BNGGGCTATCTCCGGNANTGTCATTATCATCCCGGGTAAAAGAGCTTTACAACCCTAAGGCCTT
CATCACTCACGCGGCATTGCTGGATCAGGCTTTGCCCCATTGTCCAATATTCCCCACTGCTGCCT
CCCGTAGGCCCCCCGTGCAAATGNGTNTGGTANGCNGCANTGNAAANNTANNNNTAANNTTATA
ATAAGANANNAANANNAAAAANGNTNAAAAANNTAATAAATANAAAANAATNNATNNTANATAAT
AATNTANAANNANAATNTNNGTTNNACANNAANATNNAAGNAANAANNAANNAAAAAAAGAAAAAN
TTGNAAANANAATATATTTAANTCTAANTTACTTAANTAANANATNTATAGNAAANNNNGNTANAANT
ATNATAANTATNTNANNTAANNTTANAGAAAANCNTAANNTATANTTAATNNTNGAGAAAANNAAT
TNNTATAANANANAGANNANANTGNANTNNNAAANTANAAAANNNNTCANNANAGNTATAAANAA
NNATNNATANAAGANTTATTAANNAGTANTTTANNTNNTNNTAATTAANNTGNANANANANAN
AATNANAGAATAAAACAAATATTAATAATTNAATNANAAGTANNTTNAANNAGANTATANNTANTA

AAANAAGNTTNNAAAANNNAANNANATAAATAAGNATGNNNAANAATNNATATATAANTANAATAA
TANNAAAAAANNANATNNAANGNAAAANTAAAAATANANAAAAANANANNTATAATANANNAN
ANANNNATNAATNATNANACNNANNTNAANAANAANTAATCNCATNAATTNGTAAATATNACTTAAT
AAANAATANANAANAAAAANAANANNANNGGNANTNATCNGTNNAAAAAANANAATTNTNTNNA
ANTNANAAGTNNTATTAANNCTNAAAANAAAANNNTCTTANTTATTATNANNAAATANANNNAANNAA
NTNATNTCNNANNNNATAATATAATNAAAGNTTATCATNTATAATNNNNGAGTAANANATATANAAT
AAANTNANAANATTATAANATANANATANAAAAAANTTAAAAAACTNAAAAATAGTGNNAAAANNNANN
TATNNNTACNACNAGNNANTATNNTAANATTAATAACAANANNANANANTAAAAAAATAAANNATTAA
NAAANCAAGTNNTAANTANAANAAAAANAATAATNANNAACTANTTTANGANTANTTNTAAGAGAAAT
GAANTTANATNATTACAAANNNGTCNNAANNAATTTTTNNAANAGATNAANGAGNNAANATTATAA
TTTAGANNNTGTTAAAACANNAATNTCNNATAANANATTNTACATNNAAAAAATATACATNNATAAT
AAAATAANTNATTAAGTTANNANNCAATCAANNCANATGAATAAGAAAGATAAANNANNNTATA
TATANTATTNATAANAATAAANTANNANTTATNNGATTNATANANANTATANANANAATAATNTAN
AATNNNTANAANATAAAAAGAATANNANTAAATTTNAATGANNATNCNTGTNATNTGANCGAANNT
AA

Site 9 : Dokkum, Netherlands – Oak of c. 590yrs

UoP Ref:7W1

BACPOLES Ref: 9.ta.4 (Netherlands)

Clone 1 closely resembled: *Desulfovibrio alaskensis*, *Desulfovibrio vietnamensis*

Seq: **UoP Ref:7W1 Clone 1**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGGGCTTCTCTGGGGTTACCGTCAACTTCTTAC
GAAGCTTCTTCACCCCTGACAGGAGTTTACGACCCGAAGGCCTTCATCCTCCACGCGGGCGTCCG
TGCGTCAGGCTTTCGCCATTGCGCAAATTCCTCA

Site12 : BZN, Netherlands – Oak and Scot's Pine of c. 376yrs

UoP Ref: 23W1

BACPOLES Ref: 12.td.1.3 (Netherlands)

Clone 1 closely resembled: Actinobacteria, *Cellulomonas* sp. *Streptomyces* sp. *Arthrobacter* sp.

Seq: **UoP Ref: 23W1 Clone 1**

AITACCGCGTGCTGCTGGCACGTAGTTAGCCGGCGCTTCTTCTGCAGGTACCGTCACTTTCGCTT
CTTCCCTGCTGAAAGGGGTTTACAACCCGAAGGCCTTCATCCCCACGCGGGCGTCCGCTGCATCA
GGCTTTCGCCATTGTGCAATATTCCTCA

Clone 2 closely resembled: *Tanella salinilacus*, *Tanella fryxellensis*, *Methylarcula* sp., *Roseobacter* sp., *Jannaschia helgolandensis*, *Antarctobacter heliothermus*, *Ruegeria* sp., *Antarctobacter* sp.

Seq: **UoP Ref: 23W1 Clone 2**

ATTACCGCCGTGCTGCTGGCACGGAGTTAGCCGGGGTTTCTTTACCAGGTAAGTGCATTATCATC
CCTGGCGAAAGAGCTTTACGACCCTAAGGCCTTCGTCACTCACGCGGCATCGCTAGATCAGGCT
TGCGCCCATTGTCTAAGATTCCCCA

Clone 4 closely resembled: *Psychrobacter glacincola*, *Psychrobacter aquatica*, *Psychrobacter vallis*.

Seq: **UoP Ref: 23W1 Clone 4**

ATTACCGCGGCTGCTGGCACAGAGTTAGCCGGTGCTTATTCTGCAGCTAATGTCATCGTCTCCGG
GTATTAACCGAAGAGTCTTCTTCACTGCTTAAAGTGCTTTACAACCAAAGGCCTTCTTACACAC
GCGGCATGGCTGGATCAGGGTTTCCCCATTGTCCAATATTCCTCA

Clone 5 closely resembled: *Tanella salinilacus*, *Methylarcula* sp.

Seq: UoP Ref: 23W1 Clone 5

ATTACCGCGGCTGCTGCACGGAGTTAGCCGGGGTTTCTTTACCAGGTAAGTGCATTATCATCCCT
GGCGAAAGAGCTTTACGACCCTAAGGCCTTCGTCACTCACGCGGCATCGCTAGATCAGGCTTGC
GCCATTGTCTAAGATTCCCCA

UoP Ref: 26W1 (Ew1)
BACPOLES Ref: 12.td.2.3 (Netherlands)

DGGE band D closely resembled: *Rhodobacter* sp., uncultured/unidentified sp.

Seq: **UoP Ref: 26W1 DGGE DGGE band D**

TNGGGACGGGTCATTATCATCCCNGGGGTGNAAGAGCTTTACAACCCTAAGNCCTTCATCNCN
CACGCGGNATGGCTAGATCAGGCTTGCGCNCATTGTCTAAGATTCCCCTGCTGCCTCCCGTA
GGCCCCGGTGCATNGCGTANGGCNCGCGTGCAGTGCAA

DGGE band F closely resembled: *Rhodobacter* sp.

Seq: **UoP Ref: 26W1 DGGE Band F**

GGGNTNTCGCGGAACGTCATTATCTTCCAGGTGAAGGACTTTACAACCCTAAGGCCTTCATCGC
TCCACGCGGCATGGC
TAGATCAGGCTTGCGCCATTGTCTAAGATTCCCCTGCTGCCTCCCGTAGGCCCCCNNGTGA
TACCGTAGGCCCC
GTGCAAGNAA

Site13 : BZN, Netherlands – Oak and Scot’s Pine of c. 360yrs

UoP Ref:40W1

BACPOLES Ref: 13.TA.4 (Netherlands)

Clone 1 closely resembled: *Bacillus benzoovorans*, *Bacillus* sp., *Bacillus megaterium*, *Marinibacillus marinus*, *Marinibacillus campisalis*

Seq: **UoP Ref:40W1 Clone 1**

ATTACCGCCGCGTTTGGCTGGCACGTAGTTAGCCGTGGCTTTCTGGTTAGGTACCGTCAAGGTAC
GAGCAGTTACTCTCGTACTTGTCTTCCCTAACAACAGAGTTTTACGATCCGAAAACCTTCATCAC
TCACGCGGCGTTGCTCCGTCAGACTTTCGTCCATTGCGGAAGATTCCCTA

Clone 3 closely resembled: *Novosphingobium* sp., *Novosphingobium subarcticum*, *Erythrobacter* sp., *Erythrobacter* sp., *Erythrobacter flavus*, *Zymomonas* sp., *Porphyrobacter tepidarius*, *Porphyrobacter neustonensis*.

Seq:**UoP Ref: 40W1 Clone 3**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGAGCTTATTCTCCAGGTAAGTGCATTATCATCCC
TGGTAAAAGAGCTTTACAACCCTAAGGCCTTCACCACTCACGCGGCATTGCTGGATCAGGCTTTC
GCCATTGTCCAATATTCCCA

Site 14: Travenhorst, Germany – Oak of unknown age

UoP Ref: 82W1

BACPOLES Ref: 14.TA.HE.3. 0,34-1,57

Clone 2 closely resembled: *Herbaspirillum* sp., *Janthinobacterium* sp., *Janthinobacterium lividum*, *Pseudomonas mephitica*, *Janthinobacterium agaricidamnorum*

Seq:**UoP Ref:PW1 (82W1) Clone 2**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGTGGCTTATTCTTCAGGTACCGTCATTAGCAGGAG
ATATTAGCTCCACCGTTTCTTCCCTGACAAAAGAGCTTTACAACCCGAAGGCCTTCTTCACTCAC
GCGGCATTGCTGGATCAGGCTTGCGCCATTGTCCAAAATTCCCA

UoP Ref: 107W1

BACPOLES Ref: 14.TA.+ TE.20-0,62-0,89

DGGE band B closely resembled: *Cytophaga* sp. *Flavobacterium* sp.

Seq:**UoP Ref: 107W1 DGGE band B**

TTNAAANNANNNNNNNNGGAAANTNTNTACNAANNCCNNNNAAGCTNCNACACGNTCNGAATGTT
TCTTCTCGTATAAAA
GCAGTNCTANTNATCCATAGGACCGTCATCCTGCACGCGGCATGGCTGGATCAGGCTTGCGCCC
ATTGTCCAATATTCTT
CACTGCTGCCTCCCGTAGGCCCCCGTGCAANNANNNNTNTNTAANNNATANAAANNTATTTAA
AAANA

Site 23 : Leeuwarden, Netherlands –Scot's Pine of c. 100yrs

UoP Ref: 43W1

BACPOLES Ref: 23.td.1.80

Clone 2 closely resembled: *Sphingomonas* and *Porphyrobacter* species

Seq:**UoP Ref: BW1 (43W1) Clone 2**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGGGCTTATTCTCCCGGTAAGTGTGATTATCATCCC
GGGTAAAAGAGCTTTACAACCCTAAGGCCTTCATCCCTCACGCGGCGTTCGCTGCATCAGGCTTTC
GCCATTGTGCAATATTCCCA

UoP Ref: 44W1

BACPOLES Ref: 23.td.1.300

DGGE band closely resembled: CFB group bacterium

Seq:**UoP Ref: 44W1 DGGE band**

GCTATCGTANGGANCGTTTCAGCCTACTCATCACGAGTAGATAGGGNTTATCCCTATACAAAAGT
AAGTTTACAACCCATAGGGCCGGTCGCTCCTTCACGCGGGATGGCATGGATCAGGCTCTCACCC
ATTGTCCAATATTCTCACTGCTGCCTCCCGTAGGCCCCCGTGCAAGCAA

Site 24: Bryggen, Norway. Scot's Pine of unknown age

UoP Ref: 10W1

BACPOLES Ref: 24.ta.5.1

Clone 12₁ closely resembled: *Janthinobacterium* sp., *Pseudomonas* sp., *Oxalobacter* sp.,
Aquaspirillum sp., *Herbaspirillum* sp., *Matsuebacter* sp.

Seq:**UoP Ref: 10W1 clone 12₁**

ATGGTTTGTGAAGGAGGCAGATTGAACGCTGGCGGCATGCCTTACACATGCTAGTCGAACGGC
AGCACGGAGCTTGCTCTGGTGGCGAGTGGCGAACGGGTGAGTAATATATCGGAACGTACCCTAG
AGTGGGGGATAACGTAGCGAAAGTTACGCTAATACCGCATACGATCTACGGATGGAAGTGGGGG
ATCGCAAGACCTCATGCTCGTGGAGCGGCCGATATCTGATTAGCTAGTTGGTAGGGTAAAAGCCT
ACCAAGGCATCGATCAGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGAAGTGGAGACACGGT
CCAGACTCCTACGGGAGGCAGCAGTGGGGAATTTTGGACAATGGGCGAAAGCCTGATCCAGCAA
TGCCGCGTGAGTGAAGAAGGCCTTCGGGTTGTAAGCTCTTTTGTGAGGGAAGAAACGGTGAGG
GCTAATATCCCTTGCTAATGACGGTACCTGAAGAATAAGCACCGGCTAACTACGTGCCAGCAGCC
GCGGTAATACGTAGGGTGCAAGCGTTAATCGGAATTAAGCGTAAAGCGTGCCGAGGCGGTT
TTGTAAGTCTGATGTGAAATCCCCGGGCTCAACCTGGGAATTGCATTGGAGACTGCAAGGCTAGA
ATCTGGCAGAGGGGGGTAGAATCCACGTGTAGCAGTGAATGCGTAGATATGTGGAGGAACAC
CGATGGCGAAGGCAGCCCCCTGGGTCAAGATTGACGCTCATGCACGAAAGCGTGGGGAGCAAA
CAGGATTAGATACCCTGGTAGTCCACGCCCTAAACGATGTCTACTAGTTGTGCGGTCTTAATTGA
CTTGTAAGTACTGAGCTAACGCGTGAAGTAGACCGCCTGGGGAGTACGGTCCGCAAGATTAAGTCT
AAAGGAATTGACTGGGACCCGCACAAGCGGTGGATGATGTGGAATAATCCGATGCAACGCGAA
AATTACCTACCCTTTGACATGGCTGGAATCCCCGAAAGATTTGGGAAGTGTCCGAAAGAAAGCC
AGTACACAGGTGCCTGCATGGGCTTGTGTCACCTCGGTCCGGAATGTGGTAAGTCCCCACAC
AGCGCACCTTTGCATTTAGTTTGTATCAAGACCCTCATAGGAAGTTCGCCGGTAGACAAACCCC
TAAGATAGTGTGGGATAGGACACCC

Clone 12₂ closely resembled: *Janthinobacterium* sp., *Massilia* sp., *Duganella* sp.,
Pseudomonas sp., *Collimonas* sp., *Herbaspirillum* sp.

Seq:**UoP Ref: 10W1 clone 12₂**

CGGCTACCTCTGTTTACGACTTCACCCCAGTACGAATCCTACCGTGGTAAGCGCCCTCCTTGCG
GTTAAGCTACCTACTTCTGGTAAAACCCGCTCCCATGGTGTGACGGGCGGTGTGTACAAGACCC
GGGAACGTATTCACCGCGACATGCTGATCCGCGATTACTAGCGATTCCAAGTTCATGCAGTTCGAG
TTGCAGACTACAATCCGGACTACGATACACTTTCTGGGATTAGCTCCCCCTCGCGGGTTGGCGG
CCCTCTGTATGTACCATTGTATGACGTGTGAAGCCCTACCCATAAGGGCCATGAGGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCAGTCTCATTAGAGTGCCCTTTCTGATGCAACTAAT
GACAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGACAGCCA
TGCAGCACCTGTGTTACGGCTCTTTTCGAGCACACCTCGATCTCTCGTGGCTTCCGTACATGTC
AAGGGTAGGTAAGGTTTTTCGCGTTGCATCGAATTAATCCACATCATCCACCGCTTGTGCGGGTC
CCCGTCAATTCCTTTGAGTTTTAATCTTGCACCGTACTCCCCAGGCGGTCTACTTCACGCGTTA
GCTGCGTTACCAAGTTAATTAACCCGACAAGTACTAGTACATCGTTTAGGGCGTGGACTACCAG

GGTATCTAATCCTGTTTGGCTCCCCACGCTTTCGTGCATGAGCGTCAATCTTGACCCAGGGGGCTG
CCTTCGCCATCGGTGTTCCCTCCACATCTCTACGCATTTCACTGCTACACGTGGAATTCTACCCCC
CCTCTGCCAGATTCTAGCCTTGCAGTCTCCATCGCAATTCAGGATGAGCCCGGGATTTCACGA
CAGACTACAAACGCTGCGCACGCTTACGCCAGTACTCGATACGCTGCACCTACGTATTACGCGC
TGCTGCACGTAGTAGGCGGTGCTTATTCTTACGCTACGTCATAGCAGATTTAGCCCTCACGGTTC
TCCTGACAAAAGAGCTTACAGCGAGCTCTCATCACGGCATTTCGATCGCTGCAAGTGCAATCCAAT
GGTCCCTCCGTAGGACCT

Clone 12₉ closely resembled: Uncultured beta proteobacterium, *Aminomonas* sp., *Methylophilus* sp., *Dechlorosoma* sp., *Methylobacillus* sp., *Azospira* sp., *Azoarcus* sp., *Dechlorosoma* sp., *Methylomonas* sp.

Seq:UoP Ref: **10W1 clone 12₉**

CGGCTACCTCTGTTACGACTTCACCCAGTCATGAACCCACCGTGGTAAGCGTCCCCCTTGCG
GTTAGACTACCTACTTCTGGTGAAACCCACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCC
GGGAACGTATTCACCGCGACATGCTGATCCGCGATTACTAGCGATTCCGACTTCATGAAGTCGAG
TTGCAGACTTCAATCCGGACTACGATCGGCTTCTGGGATTGGCTCCCCCTCGCGGGTTGGCAA
CCCTCTGTACCGACCATTGTATTACGTGTGAAGCCCTGGCCATAAGGGCCATGAGGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCAGTCCCATTAAGTGCCCAACTAAATGATGGCAA
TTAATGGCAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGAC
AGCCATGCAGCACCTGTGTCCACTTTCCCTTTCGGGCACCTAATGCATCTCTGCTTCGTTAGTGG
CATGTCAAGGCCAGGTAAGGTTTTTTCGCGTTGCATCGAATTAATCCACATAATCCACCGCTTGTG
CGGGCCCCCGTCAATTCCTTTGAGTTTTAATCTTGCACCGTACTCCCCAGGCGGTCTACTTCAC
GCGTTAGCTGCGTTACTAAGAGATTTTACTCTCCCAACAAGTAGTAGACATCGTTTAGGGCGTGG
ACTACCAGGGTATCTAATCCTGTTTGGCTCCCCACGCTTTCGTGCATGAGCGTCAGTATTGACCCA
GGGGGCTGCCTTCGCCATTGGTATTCCCTCCACATCTCTACGCATTTCACTGCTACACGTGGAATC
CTACCCCCCTCTGCCATACTCTAGCCTTGTAGTTTTCAAACGCAGTTCAGGTTGAGCCCGGGGGC
TTTACATCTGACTTACAAAACCGCTGCGCACGCTTACGCCAGTATTTCGATACGCTCGCACCCCT
ACGTATACGCGCTGCTGACGTAGTAGCGGTGCTTCTTATCAGTACGTCATAACACAGATATCGCT
GGATCGTCTCGTGGCAAGAGCTACACGAAGGCCTTACTCACCGGAATGGCTGATCAGCTGGC
CCATGTTCAATCCCCAATGT

UoP Ref: **4W1**

BACPOLES Ref: 24.ta.3

DGGE Band closely resembled: *Acidovorax* sp.

Seq:UoP Ref: **4W1 DGGE band**

GCTATCTAGGTACGGTCATGGGACCCCCCTTTATTAGAAGGAGTCTTTTCGTTCCGTACAAAAGC
AGTTTACAACCCGAAGGCCTTCATCCTGCACGCGGCATGGCTGGATCAGGCTTTCGCCATTGT
CCAAAATTCCCCTACTGCTGCCTCCCGTAGGGCCCCCGTGCAA

UoP Ref: **9W1**

BACPOLES Ref: 24.ta.3

DGGE Band closely resembled: *Pseudomonas* sp., *Halomonas* sp.

Seq:UoP Ref: **9W1 DGGE band**

GGGNNTTTNNTGGGNACGNTCANNNCCACCGGNTNATTANANAAAANGAGGATTTNCGACTTC
CCGAATAAAAANGTTGTTTTTACAANCCGAAGGCNCTTCATTACAAACACNTCCGGTCATTGGTGGAT
NANGCCTTGCGNGCCATTGTCCAATATTCCCCTACTGNTNCTCCCGTAGGCCCCCCCGTGCAA

Site 25 : Mollosund, Netherlands – Oak of unknown age

UoP Ref: **76W1**

BACPOLES Ref: 25.ta.1.a.4

Clone 1₁ closely resembled: *Pseudomonas* sp., Arctic sea ice bacterium, *Streptomyces* sp., *Halomonas* sp., *Cytophaga* sp., *Nocardia* sp., *Acidithiobacillus* sp., *Microcystis aeruginosa*, *Staphylococcus aureus*, *Hydrogenophaga palleronii*, *Paenibacillus* sp., *Bradyrhizobium* sp., *Corynebacterium bovis*, *Cellulophaga* sp.

Seq:UoP Ref: **76W1 Clone 1₁**

AGGTAGCCGAGTCGTAACAAGGTAGCCGA

Clone 1₆ closely resembled: Oxalobacteraceae sp., Janthinobacterium sp., Oxalobacter sp., Pseudomonas mephitica, Duganella sp., Massilia timonae, Ultramicrobacterium sp., Herbaspirillum sp., Aquaspirillum sp., Matsuebacter sp.

Seq: **UoP Ref: 76W1 Clone 1₂**

GATTGAACGCTGGCGGCATGCCTTACACATGCAAGTCGAACGGCAGCGCGGGGCAACCTGGCG
GCGAGTGGCGAACGGGTGAGTAATATATCGGAACGTACCCTGGAGTGGGGGATAACGTAGCGA
AAGTTACGCTAATACCGCATACGATCTAAGGATGAAAGCAGGGGACCGCAAGGCCTTGTGCTCC
TGGAGCGGCCGATATCTGATTAGCTAGTTGGTGGGGTAAAGGCCACCAAGGCATCGATCAGTA
GCTGGTCTGAGAGGACGACCAGCCACACTGGAAGTGGAGACACGGTCCAGACTCCTACGGGAGG
CAGCAGTGGGGAAATTTGGACAATGGGCGCAAGCCTGATCCAGCAATGCCCGTGGAGTGAAGAA
GGCCTTCGGGTTGTAAAGCTCTTTTGTGTCAGGGAAAGAAACGGTGTGGGCTAATATCCCATGCTAAT
GACGGTACCTGAAGAATAAGCACCGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGTG
CAAGCGTTAATCGGAATTAAGTGGCGTAAAGCGTGCGCAGGCGGTTTTGTAAAGTCTGTGCTGAAA
TCCCCGGGCTCAACCTGGGAATGGCGATGGAGACTGCAAGGCTAGAGTTTGGCAGAGGGGGT
AGAATTCCACGTGTAGCAGTGAAATGCGTAGATATGTGGAGGAACACCGATGGCGAAGGCAGCC
CCCTGGGTCAAACCTGACGCTCATGCACGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGG
TAGTCCACGCCCTAAACGATGTCTACTAGTTGTGCGGGTCTTAATTGACTTGGTAACGCAGCTAAC
GCGTGAAGTAGACCGCCTGGGGGAGTACGGTCGCAAGATTAACACTCAAAGGAATTGACGGGGA
CCCGCACAAGCGGTGGATGATGTGGATTAATTCGATGCACGCGAAAAACCTTACCTACCCTTGAC
ATGGATGCATCTTGAAAGATTGAGGAGTGCCCGAAGGAACATACACAGTGCTGCATGCTGTCGTC
AGCTCGTGTCTGAAATGTTGGTAAGTCCCGCACGAGCGCACTGTCATTAGTTGCCTACGAAAGAA
ACCTCTTATGAAACTGCGGTGACAAATCGGAGAAAAGGGGTGGGAATTAACAGT

Site 26 : Elst, Netherlands – Oak c. 1900yrs

Note: All sequences come from DGGE bands of Thomas's consortia not actual wood

UoP (slu) Ref: 90w (A171)B

BACPOLES Ref: Elst te 3 0-74 26

DGGE band resembled: *Pseudomonas* sp.

Seq: **UoP (slu) Ref: 90w (A171)B DGGE band**

GNGGGCTTATCTGTGGTAAGATCAAACCTGCAGGGTTATTAACCAGGCAGCCCTTCCNAACTT
AAAGTGCTTTACAATCCGAAGACCTTCTTACACACGCGGCATGGCTGGATCAGGCTTTCGCCCA
TTGTCCAATATTTCCCACTGCTGCCTCCCGTAGGCCCCCCCGTGCAAAA

UoP (slu) Ref: 92w (A169 993)B

BACPOLES Ref: 26 te 10-78

DGGE band resembled: *Brevundimonas* sp.

Seq: **UoP (slu) Ref: 92w (A169 993)B DGGE band**

CTNTTGCGGGTACGGTCATTNTCGCTCNCCGGTGAAGANTTTTANGATTNTAANACCTTCATC
ATTCNNGCGACCATGGANNCGTTCAGGNTTTCGCCATTGCTGCANGATTCCACANTTGGCT
GCCTNCGGTAAGANCCCCGTAGNNTGCTCCCGTAGGCCCCCCCGTGCAA

UoP (slu) Ref: 92w (A169 993)

BACPOLES Ref: 26 te 10-78

Clone 1 resembled: *Bacillus* sp.

Seq: **UoP (slu) Ref: 92w (A169 993) clone 1**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGTGGCTTTCTGGTTAGGTACCGTCAAGGTACCGG
CAGTTACTCCGGTACTTGTCTTCCCTAACACAGAGCTTTACGACCCGAAGGCCTTCATCGCTC
ACGCGGCGTTGCTCCATCAGACTTTTCGTCCATTGTGGAAGATTCCCTACTGCTGCCTCCCGTAGG
AAGGGCGAATTCCAGCACACTGGCGGCGTACTAGTGGATCCGAGCTCGGTACCAAGCTTGGC
GTAATCATGGTCATAGCTGTTTCTGTGTGAAATTGTTATCCGCTCACAATTCCACAC

Clone 2 resembled: *Bacillus* sp.

Seq: **UoP (slu) Ref: 92w (A169 993) clone 2**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGTGGCTTTCTGGTTAGGTACCGTCAAGGTACCGG
CAGTTACTCCGGTACTTGTCTTCCCTAACACAGAGCTTTACGACCCGAAGGCCTTCATCGCTC
ACGCGGCGTTGCTCCATCAGACTTTTCGTCCATTGTGGAAGATTCCCTACTGCTGCCTCCCGTAGG

AAGGGCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGATCCGAGCTCGGTACCAAGCTTGGC
GTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACA

Clone 8 resembled: *Brevundimonas* sp.

Seq: **UoP (slu) Ref: 92w (A169 993) clone 8**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGAGACTTTCTCCTGAGGTACCGTCCTTGCACCGG
ACGTTACTCCGGGTTTTGTTCTTCCCTAACCTTCTACCTTTACGACCCGAAGGTCTTCATCGCTTG
CGCCCATTTGCTCCAATTCCTCACTGCTGCCTCCCAGAAGATCGCTAAAGCTGCCTCCCTGGGAG
CCGTTAATTCCGGATCCCAGCTCGGCGTTAGCTTGGATTAATCATGGTCATAGCTGTTTCCTGTG
TCAAATTGTTATCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACTGTA

Site 27 : GZ-80, Netherlands – Oak c. 450yrs

UoP Ref: 88W1

BACPOLES Ref:27.ta.3

Clone 3 closely resembled: *Mesorhizobium* sp., *Rhizobium mediterraneum*

Seq: **UoP Ref: 88W1 Clone 3**

ATTACCGCGGCTGCTGGCACGAAGTTAGCCGGGGCTTCTTCTACGGCTACCGTCATTATCTTCAC
CGTTGAAAGAGCTTTACAACCCTAGGGCCTTCATCACTCACGCGGCATGGCTGGATCAGGCTTG
CGCCATTGTCCAATATTCCCA

Clone 4 closely resembled: *Cellvibrio* sp., *Cellvibrio ostraviensis*, *Cellvibrio mixtus* subsp. *Mixtus*,
Cellvibrio vulgaris, *Myxobacterium*, *Cellvibrio fulvus*, *Pseudomonas fluorescens*, *Pseudomonas putida*

Seq: **UoP Ref: 88W1 Clone 4**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGTGCTTCTTCTGTGGGTAACATCAATTCACTCAC
GTATTAGGTGAATGACCTTTCTCCCACTGAAAGTGCTTTACAACCCTAAGGCCTTCTTCACACAC
GCGGCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCCCA

Clone 5 closely resembled: *Variovorax* sp., *Aquaspirillum delicatum*, *Rhodofera fermentans*,
Acidovorax avenae subsp. *citrulli*, *Acidovorax avenae* subsp. *cattleyae*

Seq: **UoP Ref: 88W1 Clone 5**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGTGCTTATTCTTACGGTACCGTCATGAGCCCCCT
GTATTAGAGGAAGCCTTTTCGCTCCGTACAAAAGCAGTTTACAACCCTAAGGCCTTTCATCTGCA
CGCGGCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCTCA

Clone 6 closely resembled: *Cellvibrio* sp.

Seq: **UoP Ref: 88W1 Clone 6**

TAAACCCCGCCCCTTTTTTGGCTGGGCACGGAGTTAGCCGGTGCTTCTTCTGTGGGTAACATCAA
TTCACCTACGTATTAGGTGAATGACCTTTCTCCCACTGAAAGTGCTTTACAACCCTAAGGCCTTC
TTCACACACGCGGCATGGCTGGATCAGGCTTGCGCCATTGTCCAATGTTCCCACTGCTGCCT
CCCGTAGGCCCCCGTGCCCC

Clone 8 closely resembled: *Sphingomonas* sp., *Sphingomonas macrogoltabidus*, *Sphingomonas*
adhaesiva, *Sphingopyxis alaskensis*, *Sphingomonas aerolata*, *Sphingomonas faenia*, *Sphingomonas*
aurantiaca

Seq: **UoP Ref: 88W1 Clone 8**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGAGCTTATTCTCCCGGTAAGTGTTCATTATCATCCC
GGGTAAAAGAGCTTTACAACCCTAGGGCCTTCATCACTCACGCGGCATTGCTGGATCAGGCTTTC
GCCATTGTCCAATATTCCCA

Clone 9 closely resembled: *Flavobacterium* sp., *Cytophaga aquatilis*, *Flavobacterium xinjiangensis*,
Flavobacterium hydatis, *Flexibacter aurantiacus* subsp. *excathedrus*, *Cytophaga succinicans*

Seq: **UoP Ref: 88W1 Clone 9**

ATTACCGCGTGCTGCTGGCACGGAGTTAGCCGATCCTTATTCTTACAGTACCGTCAATCTGGCTC
ACGAGCCAGGGTTTTCTTCTGTACAAAAGCAGTTTACAATCCATAGGACCGTCATCCTGCACGCG
GCATGGCTGGATCAGGCTTGCGCCATTGTCCAATATTCTCA

Site 28: KZ-47, Netherlands. Oak c. 480 yrs

UoP Ref: 81W1

BACPOLES Ref: 28.ta.2

Clone 11₃ closely resembled: *Janthinobacterium* sp., *Pseudomonas* sp., *Aquaspirillum* sp., *Herbaspirillum* sp., *Duganella* sp., *Oxalobacteraceae* bacterium, *Massilia* sp., Arctic sea ice bacterium, *Collimonas* sp.

Seq: **UoP Ref: 81W1 Clone 11₃**

```
CGGCTACCTTGTTACGACTTCACCCCAGTCACGAATCCTACCGTGGTAAGCGCCCTCCTTGCGGT
TAAGCTACCTACTTCTGGTAAAACCCGCTCCCATGGTGTGACGGGCGGTGTGTACAAGACCCGG
GAACGTATTCACCGCGACATGCTGATCCGCGATTACTAGCGATTCCAACCTTCATGCAGTCGAGTT
GCAGACTACAATCCGGACTACGATACACTTTCTGCGATTAGCTCCCCCTCGCGGGTTGGCGGCG
CTCTGTATGTACCATTGTATGACGTGTGAAGCCCTACCCATAAGGGCCATGAGGACTTGACGTCA
TCCCCACCTTCCCGGTTTGTACCCGGACTTAACCCAACATCTCACGACACGAGCTGACGACAGCCATG
CAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACGACAGCCATG
CAGCAGCTGTGTACTGGTTCTTTTCGAGCACTCCCCAATCTCTCGGGGATTCCAGCCATGTCAA
GGTAGAGTAAGGTTTTTCGCGTTGCATCGAATTAATCCACATCATCCACCCTTGTGCGGGTCCC
CGTCAATTCCTTTGAGTTTTAATCTCGCGACCGTACTCCCCAGGCGGTCTACTTCACGCGTTAGC
TGC GTTACCAAGTCAATTAAGACCCGACA ACTAGTAGACATCGTTTAGGGCGTGGACTACCAGGG
TATCTAATCCTGTTTGTCTCCACGCTTTTCGTGCATGAGCGTCAATCTTGACCCAGGGGCTGCCT
TCGCCATCGGTGTTCTCCACATATCTACGCATTTCACTGCTACACGTGGAATTCTACCCCCCTCT
GCCAGATTCTAGCCTTGCGAGTCTCCAATGCAATTCAGGTTGAGCCCGGGGATTTCACATCAGC
TTACAAAGCCGCCTGCGCACGCTTTACGCCAGTATTCGATACGCTTGACCCCTACGTATTACCG
CGCTGCTGCACGTAGTAGCGTGCTTATTCTTCAAGTACGGTCATAGCAGAGATATTAGCTCTCAC
GGTCTCTGGACAAGAGCTTACACCAGAAGGCTCTACTCAGCGCATGCTTGATCAGCTTCGCATGA
CAAATCCCCATGGCTGCTTTCCGTAAGAGACTCTGG
```

Clone 11₉ closely resembled: *Chryseobacterium* sp., *Haloanella* sp., *Flavobacterium* sp., *Kaistella* sp., *Bergeyella* sp., *Riemerella* sp.

Seq: **UoP Ref: 81W1 Clone 11₉**

```
CGGCTACCTTGTTACGACTTAGCCCTAGTTACTTGTGTTTTACCCCTAGGCAGCTCCTGTTACGGTCAC
CGACTTCAGGTACCCCAAACCTTCCATGGCTTGACGGGCGGTGTGTACAAGGCCCGGGAACGTAT
TCACCGCATCATGGCTGATATGCGATTACTAGCGATTCCAGCTTCATAGAGTCGAGTTGCAGACT
CCAATCCGAACCTGAGACCAGCTTTTCGAGATTCGCATCCAGTCGCCTGGTAGCTGCCCTCTGTACT
GGCCATTGTATTACGTGTGTGGCCCAAGGCGTAAGGGCCGTGATGATTTGACGTCATCCCCACC
TTCTCTCTACTTGCCTAGGCAGTCTCACTAGAGTCCCCAACTGAATGATGGCAACTAGTGACAG
GGTTGCGCTCGTTGCAGGACTTAACCTAACACCTCACGGCACGAGCTGACGACAACCATGCAG
CACCTTGAAAATTGTCCGAAGAAAAGTCTATTTCTAAACCTGTCAATTCATTTAAGCCTTGTTAA
GGTTCTCGCGTATCATCGAATTAACCCACATAATCCACCCTTGTGCGGGCCCCCGTCAATTC
TTTGAGTTTTATTCTTGCAGACGTACTCCCCAGGTGGCTAACTTATCACTTTTCGCTTAGTCTCTGA
ACCCTAAAGCCCCAAAACGAGTTAGCATCGTTTACGGCGTGGACTACCAGGGTATCTAATCCTGT
TCGCTCCCACGCTTTTCGTCCATCAGCGTCAGTAAAACATAGTGACCTGCCTTCGCAATTGGTG
TTCTAAGTAATATCTATGCATTTACCCGCTACACTACTTATTCCAGCCACTTCTACTTTACTCAAGA
CCTGCAGTATCAATGGCAGTTTCATAGTTAAGCTATGAGATTTACCAGTACTTACAGATCCGCC
TACGGACCCTTTAAACCCAATAAATCAGGATACGCTTGACCCCTCCGTATTACCGCGGCTGCTGG
CACGGAGTAGCGGTGCTTATTTCGTATAGTACTCAGCTACTCCTCACGAGAGTAGTTTTATCCCTATA
CAAAGAGGTACATCATAGGTCGTCTCAGTGAATGGCTGGATCAGGTTACCATGCAAATTC
CTATGCTGCTTCGTAGAGTCTGATTCCGGGGTTTT
```

Clone 20₈ closely resembled: Uncultured proteobacterium, *Oxalobacter* sp., *Janthinobacterium* sp., *Pseudomonas* sp., *Massilia* sp., *Herbaspirillum* sp., *Aquaspirillum* sp.

Seq: **UoP Ref: 81W1 Clone 201₈**

```
GTTTTGATCCTGGCTCAGATTGAACGCTGGCGGCATGCTTTACACATGCAAGTCAACGGCAGCG
CGGGGCAACCTGGCGGCGAGTGGCGAACGGGTGAGTAATATATCGGAACGTACCCAAGAGTGG
GGGATAACGTAGCGAAAGTTACGCTAATACCGCATACGATCTAAGGATGAAAGCAGGGGACCCG
GAGGCCTTGTGCTCCTGGAGCGGCCGATATCTGATTAGCTAGTTGGTAGGGTAAAGGCCTACCA
AGGCTACGATCAGTAGCTGGTCTGAGAGGACGACCAGCCACACTGGAACGGAGACACGGTCCA
GACTCCTACGGGAGGCAGCAGTGGGGAATTTTGGACAATGGGCGCAAGCCTGATCCAGCAATGC
CGTGTGAGTGAAGAAGGCCCTTCGGGTTGTAAAGCTCTTTTGTACGGGAAGAAACGGTGGGAGCT
AATATCTCCCACTAATGACGGTACCTGAAGAATAAGCACCCGGCTAACTACGTGCCAGCAGCCGC
```

GGTAATACGTAGGGTGAAGCGTTAATCGGAATTACTGGGCGTAAAGCGTGCGCAGGCCGTTTT
GTAAGTCTGATGTGAAATCCCCGGGCTCAACCTGGGAATTGCATTGGAGACTGCAAGGCTAGAAT
CTGGCAGAGGGGGGTAGAATCCACGTGTAGCAGTGAATGCGTAGAGATGTGGAGGAACACC
GATGGCGAAGGCAGCCCCCTGGGTCAAGATTGACGCTCATGCACGAAAGCGTGGGGAGCAAAC
AGGATTAGATACCCTGGTAGTCCACGCCCTAAACGATGTCTACTAGTTGTCGGGTTTAATTAACTT
GGTAACGCAGCTAACGCGTGAAGTAGACCGCCTGGGGAGTACGGTCGCAAGATTAATACTCAA
GGAATTGACGGGACCCGCACAAGCGGTGGATGATGGTGGATTATTCGATGCAACGCGAAAACCT
TACCTACCTTGACATGTACGGAGCACGAGAGATCGAGGGTGTCTCGAAAGAAACGTAACCAGGTG
CTGCATGCTGTGTCAGCTCTGTTCTGGATGTGGGTAGTCCCGACCAGCCACCCTTGATAGTTG
CTCCAAGACCCTAATGAACGTGCGGGGAAACCGGAGGAATGGTGGGGAATTAATTTTCT

Clone 20₉ closely resembled: Uncultured Bacteroidetes bacterium, Uncultured Cytophagales,
Bacteroides sp., Cryomorphaceae bacterium

Seq: **UoP Ref: 81W1 Clone 20₉**

CGGCTACCTCTGTTACGACTTAGCCCCAGTCACCAGTTTTACCCTAGGCCGCTCCTTACGGTTGC
AGACTTCAGGTACCCCCAGCTCCCATGGCTTGACGGGCGGTGTGTACAAGGCCCGGGAACGTAT
TCACCGCGCCGTGGCTGATGCGCGATTACTAGCGAATCCAGCTTCATGAAGTCGAGTTGCAGAC
TTCAATCCGAACTGAGACCGGCTTTTCGAGATTGGCATCTCCTCGCGGAGTAGCTCCCCTCTGTAC
CGGCCATTGTAACACGTGTGTAGCCCTGGACGTAAGGGCCGTGCTGATTTGACGTCATCCCCGC
CTTCCTCACAGCTTACGCTGGCAGTTTCACTAGAGTCCCCGGCATTACCCGCTGGCAACTAATGA
TAAGGGTTGCGCTCGTTATGGCACCTAAGCCGACACCTCACGGCACGAGCTGACGACAACCATG
CAGCACCTCGAAAAAGCCATTGCTGGCTCACACCTTTACGCGTGATTCTTCTCGCGTTTCGAGCC
CAGGTAAGGTTCCCTCGCGTATCATCGAATTAACCACATGTTCTCCGCTTGTGCGGGCCCCCGT
CAATTCCTTTGAGTTTCATCGTTGCCGACGTAATCCCCAGGTGGATCACTTAATGCTTTTACTCAG
ACGCATACATTGTATCGCATACATCCAGTGATCATCGTTTACGGCGTGGACTACCAGGGTATCTA
ATCCTGTTTGATCCCCACGCTTTCTGTGCCTCAGCGTCAGTACTAATTTAGTAAGCTGCCTTCGCAA
TCGGTGTCTGTGTAATATCTAAGCATTTCACCGCTACACTACACATTCCGCCTACCTCAATTATA
CTCAAGATATTCAGTATCAATGGCAATGCTATCGTTAAGCACAGTCTTTCACCACTGACTTAAATA
CCCGCCTACGCACCCTTTAAACCCAATAAATCAGGATACGCTCGCATCCTCCGATTACCGCGCT
GCTGGCACGGAGTAGCCGATGCTATCGTACTGTACTTCAGTATCCTCGCAGGATACAATTACCCA
GTACAAAAGAAGGTTTACACCCTTAGGCCGTCTTTCCTCCCGCGCATGCTTGTTCAGTGCCCATG
AACAAATTTCTACTGCTGCCTCCGTAAGGATTCTGGTCCCCGGG

UoP Ref: 86W1

BACPOLES Ref: 28ta1

Clone 13₁ closely resembled: *Cytophaga* sp., *Flavobacterium* sp., *Acanthamoeba* sp., Arctic sea ice
bacterium sp., *Sporocytophaga* sp.

Seq: **UoP Ref: 86W1 Clone 13₁**

CGGCTACCTTGTACGACTTAGCCCTAGTTACCAGTTTTACCCTAGGCAGCTCCTTGCGGTCACC
GACTTCAGGCACCCCCAGCTTCCATGGCTTGACGGGCGGTGTGTACAAGGCCCGGGAACGTATT
CACCGGATCATGGCTGATATCCGATTACTAGCGATTCCAGCTTCACGGAGTCGAGTTGCAGACTC
CGATCCGAACTGTGACCGGTTTTATAGATTGCTCCTGGTCGCCAGTGGCTGCTCTGTACCG
GCCATTGTAGCACGTGTGTAGCCCAAGGCGTAAGGGCCGTGATGATTTGACGTCATCCCCACCT
TCCTCACAGTTTGCAGTGGCAGTCTTGTAGAGTTCCCGACTTGACTCGCTGGCAACTAACAACA
GGGGTTGCGCTCGTTATAGGACTTAACCTGACACCTCACGGCACGAGCTGACGACAACCATGCA
GCACCTTGTAATTGTCTTGCGAAAGATCTGTTTCAAACCGGTCAATCTACATTTAAGCCTTGGT
AAGGTTCCCTCGCGTATCATCGAATTAACCACATGCTCCACCGCTTGTGCGGGCCCCCGTCAATT
CCTTTGAGTTTTCATTCTTGCGAACGTAATCCCCAGGTGGGATACTTATCACTTTTCGCTTAGCCACT
GAAATTGCTTCCAACAGCTAGTATCCATCGTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTT
CGCTACCCACGCTTTTCGTCCATCAGCGTCAATCAATTAGTAGTAACCTGCCTTCGCAATTGGTATT
CCATGTAATCTCTAAGCATTTCACCGCTACACTACATATTCTAGTTACTTCTAATAATTCAAGTCT
AACAGTATCAATGGCCGTTCCACCGTTGAGCGATGGGCTTTCACCACTGACTTATAAACGCCTAC
GACCCTTTAAACCATGATTCCGATACGCTGATCTCGTATACCGCGCTGCTGCACGGAGTAGCGAT
CTTATTCTTACGATCGGTGAGGTCGAACCGTCGATGTTTCTTCTCGTTAAAGCAGTACATCAAGAC
GTCATCTGACCGGCATGCTGGATCAGCTGCACGCAACTTTAATGTGCCTCCGTAGATCCTGATC
CGGTTCTCG

Clone 13₂ closely resembled: *Cytophaga* sp., *Flavobacterium* sp., Arctic sea ice bacterium, *Sporocytophaga* sp., Bacteroidetes bacterium, *Acanthamoeba* sp.

Seq: **UoP Ref: 86W1 Clone 13₂**

CGGCTACCTTGTTACGACTTAGCCCTAGTTACCAGTTTTACCCTAGGCAGCTCCTTGCGGTCACC
GACTTCAGGCACCCAGCTTCCATGGCTTGACGGGCGGTGTGTACAAGGCCCGGAACGTATT
CACCGGATCATGGCTGATATCCGATTACTAGCGATTCCAGCTTCACGGAGTCGAGTTGCAGACTC
CGATCCGAAGTGTGACCGGTTTTATAGATTGCTCCTGGTCGCCAGTGGCTGCTCTGTACCG
GCCATTGTAGCACGTGTGTAGCCCAAGGCGTAAGGGCCGTGATGATTTGACGTCATCCCCACCT
TCCTCACAGTTTGCAGTCTTGTAGAGTTCCCGACTTGACTCGCTGGCAACTAACAAACA
GGGTTGCGCTCGTTATAGGACTTAACCTGACACCTACGGCACGAGCTGACGACAACCATGCA
GCACCTTGTAATTGTCTTGCAGAAAGACTGTTTTCCAAACCGTCAATCTACATTTAAGCCTTGGT
AAGTTCTCGCTCATCGAATTAACCACATGCTCCACCGCTTGTGCGGGCCCGTCAATT
CCTTTGAGTTTCATTCTTGCAGACTTCCCGAGTGGGATACTTATCACTTTGCTTAGCCACT
GAAATTGCTTCCAACAGCTAGTATCCATCGTTTTACGGCGTGGACTACCAGGGTATCTAATCCTGTT
CGCTACCCACGCTTTCGTCCATCAGCGTCAATCAATTAGTAGTAACCTGCCTTCGCAATTGGTATT
CCATGTAATCTCTAAGCATTTCACCGCTACACTACATATTCTAGTTACTTCCTAATAATTCAAGTCT
AACAGTATCAATGGCCGTTCCACCGTTGAGCGATGGGCTTTCACCACTGACTTATAAACGCCTAC
GACCCTTTAAACCATGATTCCGATACGCTGATCTCGTATACCGCGCTGCTGCACGGAGTAGCGAT
CTTATTCTTACGATCGGTCAGGTCGAACCGTCGATGTTTCTTCTCGTTAAAGCAGTACATCAAGAC
GTCATCTGACCGGCATGCTGGATCAGCTGCACGCAACTTTAATGTGCCTCCGTAGATCCTGATC
CGTTCTCG

Clone 13₃ closely resembled: *Cytophaga* sp., *Flavobacterium* sp., Arctic sea ice bacterium, *Sporocytophaga* sp., *Acanthamoeba* sp.

Seq: **UoP Ref: 86W1 Clone 13₃**

ATAGTTTGATCCTGGCTCAGGATGAACGCTAGCGGCAGGCTTAACACATGCAAGTCGAGGGGTA
TAGTTCTTCGGAAGTAGAGACCGGCGCACGGGTGCGTAACGCGTATGCAATCTACCTTTTACAGA
GGGATAGCCCAGAGAAATTTGGATTAATACCTCATAGTATATAGTCCTGGCATCAGGATTATATTA
AAGTCACAACGGTAAAAGATGAGCATGCGTCCCATTAGCTAGTTGGTAAGGTAACGGCTTACCAA
GGCTACGATGGGTAGGGTCTGAGAGGGAGATCCCCACACTGGTACTGAGACACGGACCAG
ACTCCTACGGGAGGCAGCAGTGAGGAATATTGGACAATGGGCGCAAGCCTGATCCAGCCATGCC
GCGTGCAGGATGACGGTCTATGGATTGTAACCTGCTTTTATACGAGAAGAAACACTCCTTCGTG
AAGGAGCTTGACGGTATCGTAAGAATAAGGATCGGCTAACTCCGTGCCAGCAGCCGCGTAATA
CGGAGGATCCAAGCTTATCCGGAATCATTGGTTTTAAAGGGTCCGTAGGCGGTTTAATAAGTCA
GTGGTGAAGCCCATCGCTCAACGGTGAACGGCCATTGATACTGTTAGACTTGAATTATTAGGA
AGTAACTAGAATATGTAGTGTAGCGGTGAAATGCTTAGAGATTACATGGAATACCAATTGCGAAG
GCAGGTTACTACTAATTGATTGACGCTGATGGACGAAAGCGTGGGTAGCGAACAGGATTAGATAC
CCTGGTAGTCCACGCCGTAACGATGGATACTAGCTGTTGGAAGCAATTTCACTGGCTAAGCGAA
AGTGATAAGTATCCACCTGGGAGTACGTTGCAAGAATGAAACTCAAAGGAATTGACGGGGG
CCCGCACAAAGCGGTGGAGCATGTGGTTAATTCGATGATACGCGAGAACCCTTACCAAGCTTAAT
GTAGATTGACCGGTTTGGAAACAGATCTTTCGACAGACATTTACAAGGTGCTGCATGGTGTGCTCA
GCTCGTGCTGTGAGTGTCCAGGTAGGTCTTACGAGGGCACCCCTGTTGTAAGTGCAGCGAGTCA
AGTCGTACCTAACGACTGCATGCACATGGAAGAAGGTGGGGAATAACCCCAAATCATTCCGGGG
GCC

Laser-Trapped and Laser Cut Sequences – All *Stenotrophomonas* sp.

Lotte C – Clone 26₆

CGGCTACCTTGTTACGACTTCACCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAGG
TTAAGCTACCTGCTTCTGGTGAACAAACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCCCG
GGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGAG
TTGCAGACTCCAATCCGACTGAGATAGGGTTTTCTGGGATTGGCTTACCGTCGCCGGCTTGCAG
CCCTCTGTCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCGGTCTCCTTAGAGTTCCACCATTACGTGCTGGC
AACTAAGGACAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGACG
ACAGCCATGCAGCACCTGTGTTTCGAGTTCCCGAAGGCACCAATCCATCTCTGGAAAGTTCTCGAC
ATGTCAAGGCCAGGTAAGGTTCTTCGCGTTGCATCGAATTAACCACATACTCCACCGCTTGTGC
GGGCCCCCGTCAATTCCTTTGAGTTTCACTTTCGACCGTACTCCCCAGGCGGCGAACTTAAC
GCGTTAGCTTCGATACTGCGTGCCAAATTGCACCCAACATCCAGTTTCGCATCGTTTAGGGCGTGG
ACTACCAGGGTATCTAATCCTGTTTGTCTCCCACGCTTTCGTGCCTCAGTGTGAGTGTGGTCCA

GGTAGCTGCCTTCGCCATGGATGTTCCCTCCTGATCTCTACGCATTTCACTGCTACACCAGGAATT
CCGCTACCTCTACCACACTCTAGTCGCCAGTATCCACTGCAGTTCCCAGGTTGAGCCCAGGCT
TTCACAACGGGACTTAAACGACCACCTACGCACGCTTACGCCCAGTAATTCGAGTACGCTGCACC
CTTCGTATACGCGCTGCTGGCACGAGTAGCTGGTGTATTCTTAGGTACGTCATCCCACTGGGA
TTAGCAGCTGATCTACAAGCTTTACACCGAGCTTCTCACTAGCGAATGCTGATCAAGGCTTGGC
GCCCA

Lotte C – Clone 26₈

CGGCTACCTTGTTACGACTTCACCCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAGG
TTAAGCTACCTGCTTCTGGTGCAACAACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCCCG
GGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGAG
TTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTCGCCGGCTTGCAG
CCCTCTGTCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCGGTCTCCTTAGAGTTCCACCATTACGTGCTGGC
AACTAAGGACAAGGGTTGCGCTCGTTGCGGGACTTAAACCAACATCTCACGACACGAGCTGACG
ACAGCCATGCAGCACCTGTGTTGAGTTCCCAGAGGCCAATCCATCTCTGGAAAGTTCTCGAC
ATGTCAAGGCCAGGTAAGGTTCTTCGCGTTGCATCGAATTAACCACATACTCCACCGCTTGTGC
GGGCCCCCGTCAATTCCTTTGAGTTTCAGTCTTGCAGCCGTACTCCCAGGCGGCGAACTTAAAC
GCGTTAGCTTCGATACTGCGTGCCAAATTGCACCCAACATCCAGTTTCGCATCGTTTAGGGCGTGG
ACTACCAGGGTATCTAATCCTGTTTGTCTCCCACGCTTTCGTGCCTCAGTGTGAGTGTGGTCCA
GGTAGCTGCCTTCGCCATGGATGTTCCCTCCTGATCTCTACGCATTTCACTGCTACACCAGGAATT
CCGCTACCTCTACCACACTCTAGTCGCCAGTATCCACTGCAGTTCCCAGGTTGAGCCCAGGG
CTTTCACAACGGACTTAAACGACCACCTACGCACGCTTACGCCCAGTAATTCGAGTAACGCTT
GCACCCTTCGTATACCGCGCTGCTGCACGAGTAGCCGGTGTATTCTTTGGTACGTCATTCCAT
CGGTATTAGCCAGCTGATTCTTCCCAACAAGCCTTACACCGGAGGCTTCTTCCCACGCGAATGC
TGATCAGCTGCCCATGGTCCAATTTCCCATGCTTGCCCCTCCCGTAGAGGAGTCTCTGAG

Lotte C – Straight from Vial

CCGAAAAGGGGTACGCCTAACCTTGCACGTGCAACGCGCAGCACAGTACGAGTTTGCTCTTACG
GGTGGCGAGTGGCGGACGGGTGAGGAATACATCGGACTCTACTCTGTCTGGGGGATAACGTA
GGGAACTTACTCTAATACCGCATACCACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGC
CGATTGAATGACCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGGCCCCCGAGGGCGACTATC
CGTATCTGGTCTGAGAGGATGATCACCCACTCTGGAACGACACACGGTCCAGACTCCTACGGG
AGGCAGCAGTGGGAATATTGGACAATGGCGCAAGCCTGATCCACCATAACCGCTGGGTGA
AGAAGGCCTTCGGGTTGTAAGCCCTTTTGTGGAAAGAAATCCAGCTGGTTAATACCCGGGTG
GGATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAGCAGCCGCGGTAATACAAAG
GGTGCAAGCGTTACTCGGAATTACTGGGCGTAAAGCGTGCAGTGGTGGTGGTTAAGTCCGTTG
TGAAAGCCCTGGGCTCAACCTGGGCACTGCAGTGGATACTGGGCGACTAGAGTGTGGTAGAGG
GTAGCGGTATTTCGTGGTGTAGCAGTGATATGCGTAGAGATCAAGAGGAACATCCGTGGCGAGGG
CAGCTACGTGGACCAACACTGACACTGACGCACGAAAGCGTGGAGAGCAAACAAGATTATATAC
CGTGGTAGTCCACGCCCTACACTATGCAAACGTATGTTGGGTGCAATTTGACACGCAATATCGA
ATCTAACGCGTTAAGTTCGCCGCGTGGAGAGTACGGTCGCAAGACTGAAACTCAAGAGATAGAC
GGGGGGCCCGCACAGCGGTGGAATATGTGGTTTTATTTCGATGCAACGCAAAGACCTTTACCTGC
CCTTGACTTGTGCGAGCACTCCAGAGAGGATTGGTGTCTCGGAACTCAACCACAGTTGCTGCATGC
CTGTGCTCAGCTCGTGCCGTGAAGTGTGGTTAAGTCCCGCACAGCCACCTTGGTCTTAATGG
CAGCGTATGCTGACTAAGACCCGGTCAACCGGAGACGGGGGACTAGTCTATTGCCCTAGGCG
GTACCCCATTTAGTAGACAAGGCTGAGCCGCCA

Lotte D – Clone 27₁

CGGCTACCTTGTTACGACTTCACCCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAGG
TTAAGCTACCTGCTTCTGGTGCAACAACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCCCG
GGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGAG
TTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTCGCCGGCTTGCAG
CCCTCTGTCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGACGT
CATCCCCACCTTCTCCGGTTTGTACCCGGCGGTCTCCTTAGAGTTCCACCATTACGTGCTGGC
AACTAAGGACAAGGGTTGCGCTCGTTGCGGGACTTAAACCAACATCTCACGACACGAGCTGACG
ACAGCCATGCAGCACCTGTGTTGAGTTCCCAGAGGCCAATCCATCTCTGGAAAGTTCTCGAC
ATGTCAAGGCCAGGTAAGGTTCTTCGCGTTGCATCGAATTAACCACATACTCCACCGCTTGTGC
GGGCCCCCGTCAATTCCTTTGAGTTTCAGTCTTGCAGCCGTACTCCCAGGCGGCGAACTTAAAC
GCGTTAGCTTCGATACTGCGTGCCAAATTGCACCCAACATCCAGTTTCGCATCGTTTAGGGCGTGG

CCGTGGTAGTCCACGCTCTACACTATGCAAAGTGTATGTTGGGTGCAATTTGGTCACGCAGTATC
AAGCATAACGCTTTAATTTTCGTCCCCTGGAGAGTACGGTTCGCAACACTGAATCTCAAAGAATTG
GACGGGGCGCCCGCACAGCGGTGGAGTATGGTGTTTAATTCGTTGCAACGTGAAGACCTTTATT
TGCCGTGGACTGGTCAAATTTTCAAAGTGAATTTGTGCTTCGGAACCTAAACAACGGTGTCTGCA
TGCATGTCGACTTCTGTCTCATGAATGTTGGTTAAGTCCAGCACTAGCTCCACCCATGGCCTTAG
TGCACACCTATGCTGTATTCTAAGTAACCCCGTGCACGGAGACTGGGGAGACTGAGTCATAGCTA
AGCCTGGTACCCTGTTTCATGCTAGAAAGGTGCACGGACGGTAGCCACTCC

Lotte E – Straight from Vial

TAAGTTGGCGTTAGCCTACCATGCAAGTCGAACGGCAGCACAGTAAGAGCCTTGCTCTTGCGG
GTGGCGAGTGGCGGACGGGTGAGGAATACATCGGACTCTACTCTGTCGTGGGGGATAACGTAG
GGAAACTTACTCTAATACCGCATAACACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGCGC
GATTGAATGACCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGGCCCCCGAGGGCCACTATCC
GTATCTGGTCTGAGAGGATGATCACCCACACTGGAAGTACACACGGTCCAGACTCCTACGGGA
GGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGCGTGGGTGAA
GAAGGCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGATAATACCCGGGTG
GGATGACGGTACCCAAAAATAAGCACCGGCTAACTTCGTGCCAGCAGCCGCGGTAATACAAAG
GGTGAAGCGTTACTCGATATTACTGGGCGTAAAGCGTGCATGTGGTTCGTTTAACTCCGTTGT
GAAAGCTCTGGGCTCAACCTGGGAACTGCAGTGGATACTGGACGACTAGAGTGTGGTAGAGGGT
AGCGGAATTCGTGGTGTAGCAGTGAATGTCATAGAGATCGAGAAGAATCCGTGGCGAGGGCA
GCTATCTGGACCAACTCTGACTCTGACGCACGAAAGCGTGGAGAGCAAACAAGATTATATACCGT
GGTAGTCCACGCTCTACACTATGCAATCTGGATGTGGGTGCAATTTGGCACGCAGTATCGAAGCT
AACGCGTTAATTTCCCCCTCTGGAGAGTACGGTTCGCAAGACTGACACTCAGAGAATTAGACGGG
GGCCCGCACAGCGGTGAATATGTGGTTTATTTCGATGCACGCGAAGACCTTACTGGCCTTGAATGT
CGAGACTTTTCAAGAGTATGTGCTTGGGAACTCGAACAAGGGCTGATGCTTCGACGCTGGTCAG
AATGTGAATCCCGAACAGCCACCTTTCTAGTGAACGAATGGCGGAATCTAAAGGACCGTACAC
CGGAGATGAGATCTAGTCATGCTAACCAGGTACGTCATTGGGCAAGGTTACGGACGGTAGCA

Lotte F – Straight from Vial

TTTTTTGGCCTCCTTAGCGGGTGGAGAGCGGCGGAGGGGTGAGGAATACATCAGAATCTACTCT
GTCGTGGGGGATAACGTAGGGAACTTACGCTAATACCGCATAACGACCTACGGGTGAAAGCGGG
GGATCTTCAGACCTTGCGCGATTGAATGAGCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGG
CCCACCAGGGCGACGATCCGTATCTGGTCTGAGAGGATGATCACCCACTCTGGAAGTGGAGAC
GGTCCAGACTCTACGGGAGGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCA
CCCATAACCGCGTGGGTGAAGAAGGCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAAATCCA
GCTGGTTAATACCGGGTGGGATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAG
CACCCGCGTAATACAAAGGGTGAAGCGTTACTCGGAATTACTGGGCGTAAAGCGTGCCTAGG
TGGTTCGTTTAAAGTCCGTTGTGAAAGCTCTGGTCTCACTCTGGGATCTGCAGTGGATACTGGACGA
CTAGAGTGTGGTAGAGGGTAGCGGAATTCCTGGTGTAAACAGTGAATGCGTAGAGATCAAGAAG
AACATCCGTGGCGAAGGCAGCTACCTGGACCAACACTGACACTGACGCACGAAAGCGTGGAGA
GCAAACAAGATTATATACTCTGGGTAGTCCACGCCCTAACTATGCGAACTGTATGGTGGGTGCA
ATTTGGCACGCAGTATCGATGCTAACGCTTTAAGTTCGCCGTCTGGGGAGTACGGTCGCAGACT
GAAACTCAAAGATTTGACGGGGCCCCGCACAAGCGGGGGATATGGGTTTATTCTATGCACGAAA
GACCCTTACGTGGCTTTGACATGTCGAGACTTCCAGAGTGGATTGGGCCCTTTCCGGATCTCACC
ACAGGTGCTGCATGGCTGTCTTACCTCGTGTGCGGAGATGTGGGTAAGTCCACAAGAGCGCCA
CCTTTGCCTTAGGTGCACCCGTAATGGTGGACTCTAAGGAACCGCCGTTACACCCGGAAGAAGT
GGGAGTAGCCCAAGTCTCATGGC

Lotte H – Clone 30₂

CGGCTACCTCTGTTACGACTTCACCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAG
GTTAAGCTACCTGCTTCTGGTGAACAACCTCCCATGGTGTGACGGGGCGGTGTGTACAAGGCC
GGGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGA
GTTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTCGCCGGCTTGCA
GCCCTCTGTCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGAC
GTCATCCCCACCTTCTCCGGTTTGTACCCGGCGGTCTCCTTAGAGTTCCACCATTACGTGCTG
GCAACTAAGGACAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCAGACACGAGCTGA
CGACAGCCATCGACACCTGTGTTTCGAGTTCGCCAAGGCAACCAATCCATCTCTGAAAGTTCTC
GACATGTCAAGGCCAGGTAAGGTTCTTCGCGTTGCATCGAATTAACCAACATACTCCACCGCTTG
TGCGGGCCCCCGTCAATTCCTTTGAGTTTCAGTCTTGCACCGTACTCCCCAGGCGGCGAAGT
AACGCGTTAGCTTCGATACTGCGTGCCAAATTGCACCCAACATCCAGTTCGCATCGTTTAGGGCG

TGGACTACCAGGGTATCTAATCCTGTTTGTCTCCCCACGCTTTCGTGCCTCAGTGTCAGTGTTGGG
TCCGGGTAGCTGCCTTCGCCATGGATGTTCTCCTGATCTCTACGCATTTCACTGCTACACCAAG
GAATCCCGCTACCCTCTACCACACCTCTAGTCGTCCAGTATCCACTGCAGTTCCAGGTTGAGCC
CAGGGCTTTCACACGGACTTAAACGACCACCTTACGCATGCTTTACGCCCAGTATTCCGAGTAAC
GCTTGCCCTTCGTATACCGCGCTGCTGCACGAGTTAGCCGGGGCTATTCTTGGGTACGTCATC
CACGGATTAACACTTGATTCTTTCCACAAAGGCTTACACCGGAAGCCTTCTACCCCACCGGATGC
TGAACGCTTGCCCCATGCCAATTTTCCCCGGGCGGCCCTCCCCGGA

Lotte H – Straight from Vial

TGAATTAGGGGGGCACGGCCTGAAAGATGCAAGTCAACGCCAGCACAGTAAGAGCTTGCTCTT
ACGGGTGGCGAGTGGCGGACGGGTGAGGAATACATCGGAATCTACTCTGTCGTGGGGGATAAC
GTAGGGAAACTTACGCTAATACCGCATAACGACCTACGGGTGAAAGCGGGGGATCTTCGGACCTT
GCGCGATTGAATGACCCGATGTCGGATTATCTAGTTGGCGGGGTAAAGGCCACCAGGGCGACT
ATCCGTATCTGGTCTGAGAGGATGATCACCCACTCTGGAAGTGAACACGGTCCAGACTCCTAC
GGGAGGCAGCAGTGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGGTGGG
TGAAGAAGGCCTTCGGGTTGTAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGTTAATACCTGG
TTGAGATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAGCAGCCGCGGTAATACG
AGGGGTGCAAGCGTTACTCGGAATTACTGGGCGTAAAGCGTGCGTAGGTGGTTCGTTAAGTCCG
TTGTGAAAGCCGTGCGCTCACTCTGGGAAGTGCAGTGGATACTGCGCGACTAGAGTGTGGTAGA
GGGTAGCGGAATTTCTGGTGTAGCAGTAAAATGCGTAGAGATCAAGAAGAACATCCGTGGCGA
AGGCAGCTACCTGGCCCCAAGTCTGACTCTGAGGCACGAAAGCGTGGAGAGCAAACAGGATAGA
TACCCTGATAGTCCACGCCCTACACGATGCAACTGGAATGTTGGGGTGCAATTTGGCACGCAGTA
TCAATCTAACCTTAAGTTCGCCGCTGGGGAGTCCGTGCAAGACTGAAACCTCAAAGGATTGAC
GGGGTCCCCACAGCGGGGAATTATTGTGTTAATTCAATGCACGAAAACCTTACCTGGCCTGAACT
GCCGAACCTCAGATGAATGGTCTCGACTAACCCAGGCTTATGGTGCTACCTGTCCGGATTGGTA
ATCCCCACAGCAACTGCTATTGCAACATTGGGAAGTAAACGTACCCGGGAGGATCCAATTTGCC
TAGCGGTAA

Lotte I – Clone 31₃

CGGCTACCTCTGTTACGACTTCACCCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAG
GTTAAGCTACCTGCTTCTGGTGCAACAACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCC
GGGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGA
GTTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTCCCGGGCTTGA
GCCCTCTGTCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGAC
GTCATCCCCACCTTCTCCGGTTTGTACCCGGCGGTCTCCTTAGAGTTCCACCATTACGTGCTG
GCAACTAAGGACAAGGGTTGCGCTCGTTGCGGGACTTAACCCAACATCTCACGACACGAGCTGA
CGACAGCCA

Lotte I – Clone 31₉

ATGGTTTGCCCTTTGGCTCAGAGTGAACGCTGGCGGTAGGCCTAACACATGCAAGTCGAACGGC
AGCACAGTAAGAGCTTGCTCTTACGGGTGGCGAGTGGCGGACGGGTGAGGAATA

Lotte I – Straight from vial

ACTAAAAAGGGTAGCCTAAGCCTGTAACGTGCTAGGCGAGCACAGTAGGAGCTTGCTCTTACGG
GTGGCGAGTGGCGGACGGGTGAGGAATACATCGGACTCTACTCTGTCGTGGGGGATAACGTAG
GGAAACTTACGCTAATACCGCATAACGACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGC
GATTGAATGACCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGGCCACCAGGGCGACTATCC
GTATCTGGTCTGAGAGGATGATCACCCACTGGAAGTGAACACGGTCCAGACTCCTACGGGA
GGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGGTGGGTGAA
GAAGGCCTTCGGGTTGTAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGTTAATACCCGGGTG
GGATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAGCAGCCGCGGTAATAAAG
GGTGAAGCGTTACTCAGTATTACTGGGCGTAAAGCGTGCGTATGTGGTTCGTTAAGTCCGTTGA
GAAAGCTCTGGGCTCAACGTGGGGAAGTGCAGTGGATACTGGACGACTAGAGTGTGGTAGAGG
GTAGCAGATTTCTGGTGTAGCAGTAAAATGCGTAGAGATCAGGAAGATCTTGGCAAGGGCAT
CTATCTGGACCAACAC

Lotte J– Clone 32₂

CGGCTACCTTTTTACGACTTCACCCCAGTCATCGGCCACACCGTGGCAAGCGCCCTCCCGAAGG
TTAAGCTACCTGCTTCTGGTGCAACAACTCCCATGGTGTGACGGGCGGTGTGTACAAGGCCCG
GGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGATTCCGACTTCATGGAGTCGAG

TTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTCGCCGGCTTGACG
CCCTCTGGCCCTACCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCATGATGACTTGACG
TCCTCCCCACCTTCTCCGG

Lotte J – Straight from vial

CGCTAAAGGGGGCTAGGCCTACCATGCAGTCGCACGGCAGCACAGTAAGAGCTTGCTCTTACGG
GTGGCGAGTGGCGGACGGGTGAGGAATACATCGGACTCTACTCTGTCTGTTGGGGGATAACGTAG
GGAACTTACTCTAATACCGCATACCACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGCGC
GATTGAATGACCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGGCCACCAAGGCGACTATCC
GTATCTGGTCTGAGAGGATGATCAGCCACACTGGAAGTGGAGACACGGTCCAGACTCCTACGGGA
GGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGCTGGGTGAA
GAAGGCCTTCGGGTTGTAAAGCTCTTTTGTGGGAAAGATATCCAGCTGGATAAATACCTGTGTGG
GATGACTGCACCCAGAGAATAAGCACCGGCTATCTTCGTGCCAGCAGTCCGCGTAATACGAAGG
GTGCAAGCGTTACTCAGAATTACTGGGCGTAGAGCGTGCATGTGGTCTTTAAGTCCCTTTGTG
AAAGCTCTGGGCTCACCTGGGATCTGCAGTGTATACTGCGACGACTAGAGTGTGCTAGAGGGTA
GCGAATTCCTGGTGTAGCAGTGAATTGCATAGAGATCAGGAGGAACATCATGGCCAAGGCTGCT
ACTTGGAAACAACACTGACCCTGAGCACGAGCTGGGGGACCAACAGGATCATTCTTGGAAAGTCC
CCCCTTAACATTCCAACCTGGATGTGGGGCAATTGGCCCCAATATCGAGCTTACGTTAAGTCCCC
CCTGGGGATCCGGTGCAACTGAACCAAGGAATGCCGGCTCCCACCGGGGAATTTGGTTATTCA
TCACGGAACTTACTGCTGACTTGCGAACCTTCGATGGATTGTTCTGGACTGAACAAGGCTAGGCT
GCACCTTGCGGAAGTGGGTATTCCGACACGACACCTTGCCTATGACCACGATTGTGGGACTTAA
GACCTGGTCACCGGAAGGGGGGAAATCAGTCATGGCCTAGGCGGGTGACCGTCATGTGGAAT
TTCACCGCAGAACATCGAACCAT

A17 (833) P1(d) – Clone 33₇

ATGGTTTGATTCAGGGTCAGAGTGAACGCTGGCGGTAGGCCTAACACATGCAAGTCGAACGGCA
GCACAGAGGAGCTTGCTCCTTGGGTGGCGAGTGGCGGACGGGTGAGGA

A17 (833) P1(d) – Clone 33₁₀

AGCTTAAACTCTTTCTTTTTATCGGAGTGTACACCCAGTCATCGGGCCACACCGTGGCAAGCTG
CCCTCCCGAAGGTTAAGCTACCTGCTTCTGGTGCAACAACTCCCATGGTGTGACGGGCGGTGT
GTGCAAGGCCCGGGAACGTATTCACCGCAGCAATGCTGATCTGCGATTACTAGCGACTCCGACT
TCATGGAGTCGAGTTGCAGACTCCAATCCGGACTGAGATAGGGTTTCTGGGATTGGCTTACCGTC
GCCGGCTTGACGCCCTCTGTCCCTTCCATTGTAGTACGTGTGTAGCCCTGGCCGTAAGGGCCAT

A17 (833) P1 (d) – Straight from vial

ATTTAAGGGTAGGCCGATTTTTGTCATTCTGACGGCATCACAGAAAGAGTTTGCTCTTGCGGGTG
GCGAGTGGCGGACGGGTGAGGAATACATCGGAATCTACTCTGTCTGTTGGGGGATAACGTAGGGA
AACTTACGCTAATACCGCATACCACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGCGCGATT
GAATGACCCGATGTCGGATTATCTAGTTGGCGGGGTAAAGGCCCCCCAGGGCGACTATCCGTAT
CTGGTCTGAGAGGATGATCAGCCACACTGGATCTGAGACACGGCCCACACTCCTACGGGAGGCA
GCAGTGGGGAATATTGGACAGTGGGCGCAAGCCTGATCCACCCATAACCGCTGGGTGAAGAAG
GCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGCTAATACCGGGTGGGAT
GACGGTACCCAAAGAATAAGCACCGTCTAACTTCGTGCCAGCACCCGCGTAATACGAAGGGTG
CGAGTGTACTCGGAATTACTGGGCGTAGAGCGTGCATAGGTGGTCTTTAAGTCCGGTGTGAA
AGCCGTGGTCTCCACGTGGGAAGTGCAGTGTATTCTGCGGACTAGAGTGTGATAGAGGGTAGC
GAGATTTCTGGTGTGCGAGTGAAGTGCATAGAGATCAAGAGGACATCTGTGGCGAACGCAGCTA
CCTGGACCACTCTGACACTGAGGCAGAAAGCGTGGGGAGCACACGAGATTATATTCCGTGTAGT
CACCCCTTAAACGATGCGAACTGGTTGTTGGGTGCTATTTGCCCGCATTATCGAGCTAACGCTTT
AGTTGCCCCCTGGGTGTACGGTGCAGAACTGAATCTCAAAGATTTGACGGGGGCCGCCAAG
GGGGGAATATGTGGTTTTATTTTCGATGCACCGAAAACTTACCTGGCCTTGACTGGCAGAGATT
TCGAAATGGATTGGGGCTTCGGACCTGACACTGGTCTGGATGGTGGCTCCAC

A51 (813) – Straight from vial

GTTAAAAAGAGGTTAGCCTGAAGCATGTAACGTCGTACGCGCAGCACAGTAAGAGCTTGCTCTTG
CGGGTGGCGAGTGGCGGACGGGTGAGGAATACATCGGAATCTACTCTGTCTGTTGGGGGATAACG
TAGGGAACCTTACTCTAATACCGCATACGACCTACGGGTGAAAGCGGGGGATCTTCAGACCTTGC
GCGATTGAATGACCCGATGTCAGATTATCTAGTTGGCGGGGTAAAGGCCACCAAGGCGACGAT
CCGTATCTGGTCTGAGAGGATGATCACCCACACTGGAAGTGGAGACACGGTCCAGACTCCTACGG
GAGGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGCTGGGTG

AAGAAGGCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGTTAATACCCGGTT
GGGATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAGCACCCGCGGTAATACAAA
GGGTGCAAGCGTACTCGGAATTACTGGGCGTAAAGCGTGCCTAGGTGGTTCGTTAACTCCGTT
GTGAAAGCCCTGGGCTCAACCTGGGAACTGCAGTGGATACTGGACGACTAGAGTGTGGTAGAGG
GTAGCGGAATTCCTGGTGTAGCAGTAAATGCGTAGAGATCAGGAAGAACATCCGTGGCGAGCG
CAGCTACCTGGACCAACACTGACTCTGACGCACGAAAGCGTGGAGAGCAAACAAGATTATATACT
CTGGTAGTCCACGCTCTACACTATGCGAACTGTATGTTGGGTGCAATTTGGCACGCAATATCGAA
TCTAACGCGTTAAGTTCGCCGCGTGGGGAGTACGGTCCGAAGACTGAAACTCAAAGGAATAGAC
GGGGGCGCGCACAAGCGGTAGAGTATGTGGTTTTATTTCGATGCAACGCAGAAAACCATACTGG
CCCTTGGACATGTGAGAACTTTCCAGAGATGATTTGGTGCCTTCGGGAACTCAGAACACAGGTG
CTGCATGGCTGTCGTAGCTCGTGTGCGGGAGATGTGGATTAAGTCCCACAACGAGCGACACCTTT
GTCTTAAGTTGCCACCCGTATTGGGTGACTTCTAGAACCAGCGTGCACACCCGGAAGAAGGGGGG
ATGACTCAGGCTCTCTGCCTTACGCCAGGCCTACCCACGTTTCAT

A208(796) – Straight from Vial

GGAAAAATGGGGTAGCCTACCATGCAAGTCGAACGGCAGCACAGAAAGAGCTTGCTCTTGCGG
GTGGCGAGTGGCGGACGGGTGAGGAATACATCGGACTCTTCTCTGTCGTGGGGGATAACGTAG
GGAACTTACTCTAATACCGCATAACGACTACGGGTGAAAGCGGGGGATCTTCGGACCTTGCGC
GATTGAATGAGCCGATGTGCGATTATCTAGTTGGCGGGGTAAGGGCCCCCAGGGCGACGATCC
GTAGCTGGTCTGAGAGGATGATCAGCCACTCTGGAAGTACACACGGTCCAGACTCCTACGGGA
GGCAGCAGTGGGGAATATTGGACAATGGGCGCAAGCCTGATCCACCCATAACCGCGTGGGTGAA
GAAGGCCTTCGGGTTGTAAAGCCCTTTTGTGGGAAAGAAATCCAGCTGGCTAATACCCGGTTGG
GATGACGGTACCCAAAGAATAAGCACCGGCTAACTTCGTGCCAGCAGCCGCGGTAATACGAAGG
GTGCAAGCGTTACTCGGAATTACTGGGCGTAACGCGTGCCTAGGTGGTTCGTTTATGTCCGTTGT
GAAAGCTCTGGGCTCACTCTGGGCACTGCAGTGGATACTGGGCGACTAGAGTGTGGTAGAGGGT
AGCGGAATTCGTGGTGTAGCAGTATGCGTAGAGATCAGGAGGAACATCCGTGGCGAGCGCA
TCTACCTGGACCCACTCTGACTCTGACGCACGAAAGCGTGGGGAGCAAACAAGATTATATACTCT
GGTAGTCCACGCTCTACACTATGCAAAGTGTATGTTGGGTGCAATGTGGCACGCAATATCGAAGC
TAACGCTTTAAGTTCGCCGCTCTGGAGAGTACGGTCCGAAGACTGAAT
CTCAAAGAATTGACGGGGGCCCGCACACGCGGTGGAGTATGGTGTATTCAATGCAACGCAG
AGACCTTACCTTGCCCTGACATGTGCGAGATTTACAGAAATGGATTGGTGCCTTCGGAAGTCAACA
CAGGGCTGATGCTGTCGTGCTCGGTGCGGAGTGTGATAAGTCCCAAACAGCACCCCTTGTCTTT
ATGCCACCGTATTGGGGACTCTAAGAACCCGTACACGGAAATGGGGGATGACTAGCTCTTGCTTA

A141 (767) – Straight from vial

GAATGGGGGGCATATTCTGTGGTACGTCAAAGTGCAGGGTATTAACCAGCAGCCCTTCTCCCA
ACTTAAAGTGCTTTACAATCCGAAGACCTTCTTACACACGCGGCATGGCTGGATCAGGCTTTCG
CCATTGTCCAATATTCCCCTGCTGCCTCCCGTAGGCCCCCCCGTGCAA

A141 (767) – Straight from vial

GATCGGGTATATTCTGTGGTACGTCAAAGTGCAGGGTATTAACCAGCAGCCCTTCTCCCAACT
TAAAGTGCTTTACAATCCGAAGACCTTCTTACACACGCGGCATGGCTGGATCAGGCTTTCGCC
ATTGTCCAATATTCCCCTGCTGCCTCCCGTAGGCCCCCCCGTGCAA

Sequences from DNA isolated from SLU bacterial Isolates – Incomplete List at Moment as Access to computer original sequences pre-2003 inaccessible at the moment

UoP Ref: Bac 10

BACPOLES Ref: A3-2 (From 19.td.4.100, saltwater, Venice, Italy)

Clone 5 closely resembled: Uncultured eubacterium, Uncultured bacterium clone p-131, Uncultured Clostridiaceae, Uncultured Chloroflexi bacterium, Uncultured alpha proteobacterium, Uncultured *Dehalococcoides* sp.

Seq: **UoP Ref: Bac 10 clone 5**

ATTACCGCGGCTGCTGGCACGTAGTTAGCCGGGGCTTATTCATCAGGTACCGTCATTATCTTCCC
TGATAAAAGAGGTTTACAACCCGAAGGCCTTCTTCCCTCACGCGGTGTCGCTGGGTGAGGCTTTC
GCCATTGCCAATATTCTTGG

UoP Ref: Bac15

BACPOLES Ref: A 4-2 (From 19.td.4.100, Venice, Italy)

Clone 1 closely resembled: *Rhodobacter* sp., *Paracoccus* sp.

Seq: **UoP Ref: Bac 15 clone 1**

ATTACCGCGTGCTGCTGGCACGGAGTTAGCCGGGGCTTCTTCTGTTGGTACCGTCATTATCTTCC
CAACTGAAAGATCTTTACAACCCTAAGGCCTTCATCGATCACGCGGCATGGCTAGATCAGGGTTG
CCCCATTGTCTAAGATTCCCCA

Clone 2 closely resembled: *Rhodobacter* sp., *Paracoccus* sp.

Seq: **UoP Ref: Bac 15 clone 2**

ATTACCGCGGCTGCTGGCACGGAGTTAGCCGGGGCTTCTTCTGTTGGTACCGTCATTATCTTCCC
AACTGAAAGATCTTTACAACCCTAAGGCCTTCATCGATCACGCGGCATGGCTAGATCAGGGTTGC
CCCATTGTCTAAGATTCCCCA

Clone 3 closely resembled: *Rhodobacter* sp., *Paracoccus* sp.

Seq: **UoP Ref: Bac 15 clone 3**

ATTACCGCGGTTGCTGGCACGGAGTTAGCCGGGGCTTCTTCTGTTGGTACCGTCATTATCTTCC
CAACTGAAAGATCTTTACAACCCTAAGGCCTTCATCGATCACGCGGCATGGCTAGATCAGGGTTG
CCCCATTGTCTAAGATTCCCCA

Clone 5 closely resembled: *Rhodobacter* sp., *Paracoccus* sp.

Seq: **UoP Ref: Bac 15 clone 5**

ATTGACGCGTCTGCTGACTCGGAGTTAACCGAGGCTTCTTCTGTTGGTACCGTCATTATCTTCCC
AACTGAAAGATCTTTACAACCCTAAGGCCTTCATCGATCACGCGGCATGGCTAGATCAGGGTTGC
CCCCATTGTCTAAGATTCCCCA