

Table 1: <sup>13</sup>C-cellulose responders BLAST against Living Tree Project

| OTU ID   | Fold change <sup>a</sup> | Day <sup>b</sup> | All days <sup>c</sup> | Top BLAST hits  | BLAST %ID | Phylum;Class;Order                                       |
|----------|--------------------------|------------------|-----------------------|---|-----------|--|
| OTU.100  | 2.66                     | 14               | 14                    | <i>Pseudoxanthomonas Sacheonensis</i> ,<br><i>Pseudoxanthomonas dokdonensis</i>   | 100.0     | Proteobacteria<br>Gammaproteobacteria<br>Xanthomonadales |
| OTU.1023 | 4.61                     | 30               | 30                    | No hits of at least 90% identity  | 80.54     | Verrucomicrobia Spartobacteria<br>Chthoniobacterales     |
| OTU.1065 | 5.31                     | 14               | 14, 30                | No hits of at least 90% identity  | 84.55     | Planctomycetes<br>Planctomycetacia<br>Planctomycetales   |
| OTU.1087 | 4.32                     | 14               | 14, 30                | <i>Devosia soli</i> ,<br><i>Devosia crocina</i> ,<br><i>Devosia riboflavina</i>   | 99.09     | Proteobacteria<br>Alphaproteobacteria Rhizobiales        |
| OTU.1094 | 3.69                     | 30               | 30                    | <i>Sporocytophaga myxococcoides</i>   | 99.55     | Bacteroidetes Cytophagia<br>Cytophagales                 |
| OTU.114  | 2.78                     | 14               | 14                    | <i>Herbaspirillum</i> sp. <i>SUEMI03</i> ,<br><i>Herbaspirillum</i> sp. <i>SUEMI10</i> ,<br><i>Oxalicibacterium solurbis</i> ,<br><i>Herminiimonas fonticola</i> ,<br><i>Oxalicibacterium horti</i> | 100.0     | Proteobacteria<br>Betaproteobacteria<br>Burkholderiales  |
| OTU.119  | 3.31                     | 14               | 14, 30                | <i>Brevundimonas alba</i>   | 100.0     | Proteobacteria<br>Alphaproteobacteria<br>Caulobacterales |
| OTU.120  | 4.76                     | 14               | 14, 30                | <i>Vampirovibrio chlorellavorus</i>   | 94.52     | Cyanobacteria SM1D11<br>uncultured-bacterium             |
| OTU.1204 | 4.32                     | 30               | 30                    | <i>Planctomyces limnophilus</i>   | 91.78     | Planctomycetes<br>Planctomycetacia<br>Planctomycetales   |
| OTU.1312 | 4.07                     | 30               | 30                    | <i>Paucimonas lemoignei</i>   | 99.54     | Proteobacteria<br>Betaproteobacteria<br>Burkholderiales  |
| OTU.132  | 2.81                     | 14               | 14                    | <i>Streptomyces</i> spp.  | 100.0     | Actinobacteria Streptomycetales<br>Streptomycetaceae     |
| OTU.1533 | 3.43                     | 30               | 30                    | No hits of at least 90% identity  | 82.27     | Verrucomicrobia Spartobacteria<br>Chthoniobacterales     |
| OTU.154  | 3.24                     | 14               | 14                    | <i>Pseudoxanthomonas mexicana</i> ,<br><i>Pseudoxanthomonas japonensis</i>  | 100.0     | Proteobacteria<br>Gammaproteobacteria<br>Xanthomonadales |
| OTU.1754 | 4.48                     | 14               | 14                    | <i>Asticcacaulis biprosthecium</i> ,<br><i>Asticcacaulis benevestitus</i>   | 96.8      | Proteobacteria<br>Alphaproteobacteria<br>Caulobacterales |
| OTU.185  | 4.37                     | 14               | 14, 30                | No hits of at least 90% identity  | 85.14     | Verrucomicrobia Spartobacteria<br>Chthoniobacterales     |
| OTU.2192 | 3.49                     | 30               | 14, 30                | No hits of at least 90% identity  | 83.56     | Verrucomicrobia Spartobacteria<br>Chthoniobacterales     |
| OTU.228  | 2.54                     | 30               | 30                    | <i>Sorangium cellulosum</i>   | 98.17     | Proteobacteria<br>Deltaproteobacteria<br>Myxococcales    |

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| OTU ID   | Fold change | Day | All days  | Top BLAST hits  | BLAST %ID | Phylum;Class;Order   |
|----------|-------------|-----|-----------|---|-----------|--|
| OTU.257  | 2.94        | 14  | 14        | <i>Lentzea waywayandensis</i> ,<br><i>Lentzea flaviverrucosa</i>  | 100.0     | <i>Actinobacteria</i><br><i>Pseudonocardiales</i><br><i>Pseudonocardiaceae</i> |
| OTU.266  | 4.54        | 30  | 14, 30    | No hits of at least 90% identity  | 83.64     | <i>Verrucomicrobia</i> <i>Spartobacteria</i><br><i>Chthoniobacterales</i>      |
| OTU.28   | 2.59        | 14  | 14        | <i>Rhizobium giardinii</i> ,<br><i>Rhizobium tubonense</i> ,<br><i>Rhizobium tibeticum</i> ,<br><i>Rhizobium mesoamericanum</i> CCGE 501,<br><i>Rhizobium herbae</i> ,<br><i>Rhizobium endophyticum</i> | 99.54     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i> <i>Rhizobiales</i>         |
| OTU.285  | 3.55        | 30  | 14, 30    | <i>Blastopirellula marina</i>   | 90.87     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.327  | 2.99        | 14  | 14        | <i>Asticcacaulis biprosthecium</i> ,<br><i>Asticcacaulis benevestitus</i>   | 98.63     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i><br><i>Caulobacterales</i>  |
| OTU.351  | 3.54        | 14  | 14, 30    | <i>Pirellula staleyi</i> DSM 6068   | 91.86     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.3594 | 3.83        | 30  | 30        | <i>Chondromyces robustus</i>  | 90.41     | <i>Proteobacteria</i><br><i>Deltaproteobacteria</i><br><i>Myxococcales</i>     |
| OTU.3775 | 3.88        | 14  | 14        | <i>Devosia glacialis</i> ,<br><i>Devosia chinhatensis</i> ,<br><i>Devosia geojensis</i> ,<br><i>Devosia yakushimensis</i>   | 98.63     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i> <i>Rhizobiales</i>         |
| OTU.429  | 3.7         | 30  | 14, 30    | <i>Devosia limi</i> ,<br><i>Devosia psychrophila</i>  | 97.72     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i> <i>Rhizobiales</i>         |
| OTU.4322 | 4.19        | 14  | 7, 14, 30 | No hits of at least 90% identity  | 89.14     | <i>Chloroflexi</i> <i>Herpetosiphonales</i><br><i>Herpetosiphonaceae</i>       |
| OTU.442  | 3.05        | 30  | 30        | <i>Chondromyces robustus</i>  | 92.24     | <i>Proteobacteria</i><br><i>Deltaproteobacteria</i><br><i>Myxococcales</i>     |
| OTU.465  | 3.79        | 30  | 30        | <i>Ohtaekwangia kribbensis</i>  | 92.73     | <i>Bacteroidetes</i> <i>Cytophagia</i><br><i>Cytophagales</i>                  |
| OTU.473  | 3.58        | 14  | 14        | <i>Pirellula staleyi</i> DSM 6068   | 90.91     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.484  | 4.92        | 14  | 14, 30    | No hits of at least 90% identity  | 89.09     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.518  | 4.8         | 14  | 14        | <i>Hydrogenophaga intermedia</i>  | 100.0     | <i>Proteobacteria</i><br><i>Betaproteobacteria</i><br><i>Burkholderiales</i>   |
| OTU.5190 | 3.6         | 30  | 14, 30    | No hits of at least 90% identity  | 88.13     | <i>Chloroflexi</i> <i>Herpetosiphonales</i><br><i>Herpetosiphonaceae</i>       |
| OTU.541  | 4.49        | 30  | 30        | No hits of at least 90% identity  | 84.23     | <i>Verrucomicrobia</i> <i>Spartobacteria</i><br><i>Chthoniobacterales</i>      |

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| OTU ID   | Fold change | Day | All days  | Top BLAST hits  | BLAST %ID | Phylum;Class;Order   |
|----------|-------------|-----|-----------|---|-----------|--|
| OTU.5539 | 4.01        | 14  | 14        | <i>Devosia subaequoris</i>  | 98.17     | <i>Proteobacteria</i><br><i>Alphaproteobacteria Rhizobiales</i>                |
| OTU.573  | 3.03        | 30  | 30        | <i>Adhaeribacter aerophilus</i>   | 92.76     | <i>Bacteroidetes Cytophagia</i><br><i>Cytophagales</i>                         |
| OTU.600  | 3.48        | 30  | 30        | No hits of at least 90% identity  | 80.37     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.6062 | 4.83        | 30  | 30        | <i>Dokdonella sp. DC-3,</i><br><i>Luteibacter rhizovicius</i>   | 97.26     | <i>Proteobacteria</i><br><i>Gammaproteobacteria</i><br><i>Xanthomonadales</i>  |
| OTU.627  | 4.43        | 14  | 14        | <i>Verrucomicrobiaceae bacterium DC2a-100</i>   | 100.0     | <i>Verrucomicrobia</i><br><i>Verrucomicrobiae</i><br><i>Verrucomicrobiales</i> |
| OTU.633  | 3.84        | 30  | 30        | No hits of at least 90% identity  | 89.5      | <i>Proteobacteria</i><br><i>Deltaproteobacteria</i><br><i>Myxococcales</i>     |
| OTU.638  | 4.0         | 30  | 30        | <i>Luteolibacter sp. CCTCC AB 2010413</i><br><i>Luteolibacter algae</i>   | 93.61     | <i>Verrucomicrobia</i><br><i>Verrucomicrobiae</i><br><i>Verrucomicrobiales</i> |
| OTU.64   | 4.31        | 14  | 7, 14, 30 | No hits of at least 90% identity  | 89.5      | <i>Chloroflexi Herpetosiphonales</i><br><i>Herpetosiphonaceae</i>              |
| OTU.663  | 3.63        | 30  | 30        | <i>Pirellula staleyi DSM 6068</i>   | 90.87     | <i>Planctomycetes</i><br><i>Planctomycetacia</i><br><i>Planctomycetales</i>    |
| OTU.669  | 3.34        | 30  | 30        | <i>Ohtaekwangia koreensis</i>   | 92.69     | <i>Bacteroidetes Cytophagia</i><br><i>Cytophagales</i>                         |
| OTU.670  | 2.87        | 30  | 30        | <i>Adhaeribacter aerophilus</i>   | 91.78     | <i>Bacteroidetes Cytophagia</i><br><i>Cytophagales</i>                         |
| OTU.766  | 3.21        | 14  | 14, 30    | <i>Devosia insulae</i>  | 99.54     | <i>Proteobacteria</i><br><i>Alphaproteobacteria Rhizobiales</i>                |
| OTU.83   | 5.61        | 14  | 7, 14, 30 | <i>Luteolibacter sp. CCTCC AB 2010413</i>   | 97.72     | <i>Verrucomicrobia</i><br><i>Verrucomicrobiae</i><br><i>Verrucomicrobiales</i> |
| OTU.862  | 5.87        | 14  | 14        | <i>Allokutzneria albata</i>   | 100.0     | <i>Actinobacteria</i><br><i>Pseudonocardiales</i><br><i>Pseudonocardiaceae</i> |
| OTU.899  | 2.28        | 30  | 30        | <i>Enhygromyxa salina</i>   | 97.72     | <i>Proteobacteria</i><br><i>Deltaproteobacteria</i><br><i>Myxococcales</i>     |
| OTU.90   | 2.94        | 14  | 14, 30    | <i>Sphingopyxis panaciterrae,</i><br><i>Sphingopyxis chilensis,</i><br><i>Sphingopyxis sp. BZ30,</i><br><i>Sphingomonas sp.</i> | 100.0     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i><br><i>Sphingomonadales</i> |
| OTU.900  | 4.87        | 14  | 14        | <i>Brevundimonas vesicularis,</i><br><i>Brevundimonas nasdae</i>  | 100.0     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i><br><i>Caulobacteriales</i> |
| OTU.971  | 3.68        | 30  | 30        | No hits of at least 90% identity  | 78.57     | <i>Chloroflexi Anaerolineae</i><br><i>Anaerolineales</i>                       |

Table 1 – continued from previous page

| OTU ID  | Fold change | Day | All days  | Top BLAST hits                   | BLAST %ID | Phylum;Class;Order   |
|---------|-------------|-----|-----------|----------------------------------|-----------|--|
| OTU.98  | 3.68        | 14  | 7, 14, 30 | No hits of at least 90% identity | 88.18     | <i>Chloroflexi</i> <i>Herpetosiphonales</i><br><i>Herpetosiphonaceae</i> |
| OTU.982 | 4.47        | 14  | 14        | <i>Devosia neptuniae</i>         | 100.0     | <i>Proteobacteria</i><br><i>Alphaproteobacteria</i> <i>Rhizobiales</i>   |

<sup>a</sup> Maximum observed  $\log_2$  of fold change.

<sup>b</sup> Day of maximum fold change.

<sup>c</sup> All response days.