

## SEQUENCE LISTING

<110> Geneweave Biosciences, Inc.  
 F. Hoffmann-La Roche AG  
 Roche Diagnostics GmbH

<120> SEQUENCE-SPECIFIC DETECTION AND PHENOTYPE DETERMINATION

<130> P33171-WO-HS

<150> 62/155,011  
 <151> 2015-04-30

<160> 14

<170> PatentIn version 3.5

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| ggcgggtgatc | actgatgaat  | ataaggttcc  | gtctgttcaa  | ggttctggga  | aatacagacc  |          | 240  |
| gccacagtat  | caaaaaaaaa  | cttatagggg  | ctcttttatt  | tgacagtgga  | gagacagcgg  |          | 300  |
| aagcgactcg  | tctcaaacgg  | acagctcgta  | gaagggtatac | acgtcgggaag | aatcgtatatt |          | 360  |
| gttatctaca  | ggagattttt  | tcaaatagaga | tggcgaaagt  | agatgatagt  | ttctttcatc  |          | 420  |
| gacttgaaga  | gtcttttttg  | gtggaagaag  | acaagaagca  | tgaacgtcat  | cctatttttg  |          | 480  |
| gaaatatagt  | agatgaagtt  | gcttatcatg  | agaaatatcc  | aactatctat  | catctgcgaa  |          | 540  |
| aaaaattggg  | agattctact  | gataaagcgg  | atttgcgctt  | aatctatttg  | gccttagcgc  |          | 600  |
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| atgtggacaa  | actattttatc | cagttggtac  | aaacctacaa  | tcaattatttt | gaagaaaacc  |          | 720  |
| ctattaacgc  | aagtggagta  | gatgctaaag  | cgattctttc  | tgacagattg  | agtaaatacaa |          | 780  |
| gacgattaga  | aaatctcatt  | gctcagctcc  | ccggtgagaa  | gaaaaatggc  | ttatttgggg  |          | 840  |
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| aagatgctaa  | attacagctt  | tcaaagata   | cttacgatga  | tgatttagat  | aattttattgg |          | 960  |
| cgcaaattgg  | agatcaatat  | gctgatttgt  | ttttggcagc  | taagaattta  | tcagatgcta  |          | 1020 |
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| gacaacaact  | tccagaaaag  | tataaagaaa  | tcttttttga  | tcaatcaaaa  | aacggatatg  |          | 1200 |
| caggttatat  | tgatggggga  | gctagccaag  | aagaatttta  | taaatttatc  | aaaccaattt  |          | 1260 |
| tagaaaaaat  | ggatggtact  | gaggaattat  | tggtgaaact  | aaatcgtgaa  | gatttgctgc  |          | 1320 |
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| aagttgtcga  | taaaggtgct  | tcagctcaat  | cattttattga | acgcatgaca  | aactttgata  |          | 1620 |
| aaaatcttcc  | aaatgaaaaa  | gtactaccaa  | aacatagttt  | gctttatgag  | tattttacgg  |          | 1680 |
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| atagtttgac  | atttaaagaa | gacattcaaa  | aagcacaagt  | gtctggacaa  | ggcgatagtt 2280 |
| tacatgaaca  | tattgcaaat | ttagctggta  | gccctgctat  | taaaaaaggt  | attttacaga 2340 |
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| ttattgaaat  | ggcacgtgaa | aatcagacaa  | ctcaaaaggg  | ccagaaaaat  | tcgcgagagc 2460 |
| gtatgaaacg  | aatcgaagaa | ggatatcaaag | aattaggaag  | tcagattctt  | aaagagcatc 2520 |
| ctgttgaaaa  | tactcaattg | caaaatgaaa  | agctctatct  | ctattatctc  | caaaatggaa 2580 |
| gagacatgta  | tgtggaccaa | gaattagata  | ttaatcgttt  | aagtgattat  | gatgtcgatc 2640 |
| acattgttcc  | acaagtttcc | cttaaagacg  | attcaataga  | caataagggtc | ttaacgcggt 2700 |
| ctgataaaaa  | tcgtggtaaa | tcggataacg  | ttccaagtga  | agaagtagtc  | aaaaagatga 2760 |
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| aatatccaaa  | acttgaatcg | gagtttgtct  | atggtgatta  | taaagtttat  | gatgttcgta 3180 |
| aatgattgc   | taagtctgag | caagaaatag  | gcaaagcaac  | cgcaaaatat  | ttcttttact 3240 |
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| gctcagtcga | aagactgggc | ctttcgtttt | atctgttggt | tgctcggtgaa | cgctctcctg | 4320 |
| agtaggacaa | atccgccgcc | ctagacctag | caccctgcag | ttgacagcta  | gctcagtcct | 4380 |
| aggtataatg | ctagcttcca | acggtttgat | cgtcagtttt | agagctagaa  | atagcaagtt | 4440 |
| aaaataaggc | tagtccgtta | tcaacttgaa | aaagtggcac | cgagtcggtg  | ctttttttct | 4500 |
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| gacttgaaga | gtctttttttg gtggaagaag acaagaagca tgaacgtcat cctatttttg 480    |
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| aaaaattggg | agattctact gataaagcgg atttgcgctt aatctatttg gccttagcgc 600     |
| atatgattaa | gtttcgtggt ctttttttga ttgaggggaga tttaaatcct gataatagtg 660    |
| atgtggacaa | actattttatc cagttggtac aaacctacaa tcaattattt gaagaaaacc 720    |
| ctattaacgc | aagtggagta gatgctaaag cgattctttc tgcacgattg agtaaatcaa 780     |
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| ttttactttc | agatatccta agagtaaata ctgaaataac taaggctccc ctatcagctt 1080    |
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| gacaacaact | tccagaaaag tataaagaaa tcttttttga tcaatcaaaa aacggatatg 1200    |
| caggttatat | tgatggggga gctagccaag aagaatttta taaatttatc aaaccaattt 1260    |
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| atgctatttt | gagaagacaa  | gaagactttt  | atccattttt | aaaagacaat | cgtgagaaga | 1440 |
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| aagttgtcga | taaaggtgct  | tcagctcaat  | catttattga | acgcatgaca | aactttgata | 1620 |
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| tttataacga | attgacaaaag | gtcaaatatg  | ttactgaagg | aatgcgaaaa | ccagcatttc | 1740 |
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| ttattaaaga | taaagatttt  | ttggataatg  | aagaaaatga | agatatctta | gaggatattg | 1980 |
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gttccgtctg gaccgctggg agctggagct gaactccgcc atcccaggcg atgcgcgcga 600

# eol-f-seq1

|             |            |            |            |            |            |      |
|-------------|------------|------------|------------|------------|------------|------|
| tacctcatcg  | ccgcgcgccg | tgacggaaag | cttacaaaaa | ctgacactgg | gctctgcact | 660  |
| ggctgcgccg  | cagcggcagc | agtttggtga | ttggctaaag | ggaaacacga | ccggcaacca | 720  |
| ccgcatccgc  | gcggcggtgc | cggcagactg | ggcagtcgga | gacaaaaccg | gaacctgcgg | 780  |
| agtgtatggc  | acggcaaagt | actatgccgt | cgtctggccc | actgggcgcg | cacctattgt | 840  |
| gttgccgctc  | tacaccggg  | cgcctaaca  | ggatgacaag | tacagcgagg | ccgtcatcgc | 900  |
| cgctgcggt   | agactcgcgc | tcgagggatt | gggcgtcaac | gggcagtaag | gctctgaaaa | 960  |
| tcattctattg | gcccaccacc | gccgcccttg | cgggcggcat | ggattaccaa | ccactgtcac | 1020 |

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<212> DNA  
<213> Escherichia coli

<220>  
<221> gene  
<222> (1)..(1020)  
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|            |             |                                                  |
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| ggtgacgtgg | tcagccatgg  | ctcagcgcag cttgtcggcc atgcgggccg tatgagtgat 120  |
| tgcggcgcgg | ctatcggggg  | cggaatggct catcacgatc atgctggcct tggggaacgc 180  |
| cgcaccaaac | gcgcgcgctg  | acgcggcgta gtgctcagtg tcggcatcac cgagattgcc 240  |
| gagcgacttg | gccttgctgt  | ccttgatcag gcagccacca aaagcgatgt cgggtccgctc 300 |
| gatcccaacg | gtgatattgt  | cactgggtgtg gccggggccg gggtaaaata ccttgagcgg 360 |
| gccaaagtgg | ggcgcgggtg  | ctgggttcgac ccagccattg gcggcgaaag tcaggctgtg 420 |
| ttgcgccgca | accatcccct  | cttgcggggc aagctgggtc gacaacgcat tggcataagt 480  |
| cgcaatcccc | gccgcgatga  | gcgcgtccat accgcccatac ttgtcctgat gcgcgtgagt 540 |
| caccaccgcc | agcgcgaccg  | gcaggttgat ctctgcttg atccagttga ggatctgggc 600   |
| ggtctgggtc | tcgggtccagg | cggatcgcac caccagcacg cggccgcat ccctgacgat 660   |
| caaaccgttg | gaagcgactg  | ccccgaaacc cggcatgtcg agataggaag tgtgctgcc 720   |
| gacattcggg | gcgagctggc  | ggaaaaccag atcgccaaac cgttgggtcgc cagtttccat 780 |
| ttgctggcca | atcgtcgggc  | ggatttcacc gggcatgcac ccgctcagca tcaatgcagc 840  |
| ggctaattgc | gtgctcagct  | tcgcgaccgg gtgcataata ttgggcaatt ccatcaagtt 900  |
| ttccttttat | tcagcattaa  | aaaccccgca aatgcgaggc ctagtaaata gatgatctta 960  |
| atttggttca | ctgtagcaaa  | aatatggggc gaattcaaac atgaggtgcg acagtttcaa 1020 |

<210> 13  
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<213> Escherichia coli

eo1f-seq1

<220>  
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 ttagccaccc tgccgctggc ggtacacgcc agcccgagc cgcttgagca aattaaacta 180  
 agcgaaagcc agctgtcggg cagcgtaggc atgatagaaa tggatctggc cagcgggccgc 240  
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 cgcgcgcggtt atccggctcg tag 983

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 <213> Enterococcus casseliflavus

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 <222> (1)..(1200)  
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 gaagcactcc aatcatctcc ctatgactac gacctctctt tgatcgggat cgccccagat 180  
 gctatggatt ggtacttgta tacaggagaa ctggaaaaca tccgacaaga cacgtgggtg 240  
 ttggatacga aacataaaca gaaaatacag ccgctattcg aaggaaacgg cttttggcta 300  
 agtgaagagc agcaaacggt ggtacctgat gttttatttc ccattatgca tggcaaatac 360  
 ggggaagatg gcagtatcca aggattgttt gaattgatga agctgcctta tgtaggctgc 420

|            |            |             |            |            |             | eol f-seq1 |      |
|------------|------------|-------------|------------|------------|-------------|------------|------|
| ggggtggcaa | gttctgcctt | atgtatgaac  | aaatggctgc | tgcacaaagc | tgcagcagcc  |            | 480  |
| attggcgtag | aaagtgtcc  | tacgattctc  | ttgacaaatc | aagccaacca | gcaagaacaa  |            | 540  |
| atcgaagctt | ttatccagac | ccatggcttt  | ccagttttct | ttaagcctaa | tgaagcgggc  |            | 600  |
| tcctcaaaag | ggatcactaa | agtcacctgc  | gttgaagaaa | tcgcttctgc | cttaaaagaa  |            | 660  |
| gcctttactt | attgttccgc | agtgtctccta | caaaaaata  | ttgtcggtgt | tgagatcggt  |            | 720  |
| tgcggtat   | tggaacga   | ctctttgact  | gtcggtgctt | gtgacgcat  | ttcattagaa  |            | 780  |
| gacggctttt | tcgattttga | agaaaagtac  | cagctgatca | gcgcaaaat  | caccgtccct  |            | 840  |
| gcgccattgc | ctgaaacgat | tgaaaccaag  | gtcaaagaac | aagctcagct | gctctatcgt  |            | 900  |
| agtcttggtc | ttaaaggtct | tgctcgcatc  | gatttttttg | tcacggatca | aggagaacta  |            | 960  |
| tacctgaatg | aatcaatac  | tatgccgggc  | tttacgagtc | actcccgcta | tcctgccatg  |            | 1020 |
| atggcagcgg | tcggcttata | ctatcaagaa  | ctactacaaa | aactgcttat | cttagcaaaag |            | 1080 |
| gaggaagtca | aatgaatccc | tatctacagt  | tagttagcaa | aaaatttccg | ttagaaaaaa  |            | 1140 |
| accaagaacc | ccctcattta | gtccttgctg  | ccttcagcga | agacgaggtt | tacttgcagc  |            | 1200 |