

Microbial Gene Sequences submitted to NCBI, USA: 133

Molecular characterized indigenous (native) Agriculturally Beneficial Microorganisms using partial 16S/18S *rRNA* gene/ITS sequences, deposited and published online during 2010-23 at National Center for Biotechnology Information (NCBI) Gene Bank, USA.

| Sr. No. | Name | Accession No. | PGPB traits |
|---------|---|---------------|--|
| 01 | <i>Azotobacter chroococcum</i> ABA 1 | KF494187 | Nitrogen fixers |
| 02 | <i>Azospirillum lipoferum</i> ASA 1 | KR706179 | |
| 03 | <i>Azotobacter vinelandii</i> AAU 11 | KF494186 | |
| 04 | <i>Azotobacter chroococcum</i> AAU 10 13 | KF494188 | |
| 05 | <i>Rhizobium selenitireducens</i> AAU M1 | KF850625 | |
| 06 | <i>Rhizobium subbaroonis</i> R 12 | KJ598074 | |
| 07 | <i>Rhizobium cellulosilyticum</i> PP16 | KC787581 | Nitrogen fixer cum Iron and zinc mobilizer |
| 08 | <i>Rhizobium pusense</i> AAU P16 | KF888659 | |
| 09 | <i>Rhizobium daejeonense</i> AAU P19 | KJ 577633 | |
| 10 | <i>Chryseobacterium indologenes</i> AM2 | KF758545 | Non rhizobial nitrogen fixing root nodule endophytes |
| 11 | <i>Enterobacter cloacae</i> ACP3 | KF758546 | |
| 12 | <i>Enterobacter cloacae</i> AS1 | KF758544 | |
| 13 | <i>Enterobacter ludwigii</i> ABG | KF758549 | |
| 14 | <i>Klebsiella pneumonia</i> AG4 | KF758547 | |
| 15 | <i>Klebsiella variicola</i> ABG7 | KF758550 | |
| 16 | <i>Pseudomonas aeruginosa</i> ABG5 | KF758548 | Phosphate solubilizers |
| 17 | <i>Bacillus coagulans</i> PBA 16 | KF933349 | |
| 18 | <i>Bacillus tequilensis</i> AAU PSB 09 | JX403935 | |
| 19 | <i>Bacillus circulans</i> P 23 | JX133239 | |
| 20 | <i>Burkholderia cepacia</i> P 37 | JQ322558 | |
| 21 | <i>Burkholderia metallica</i> P 19 | JX133238 | |
| 22 | <i>Pseudomonas otitidis</i> P 8 | JX133237 | Potash mobilizers |
| 23 | <i>Pseudomonas gessardii</i> SSB 7 | KF481916 | |
| 24 | <i>Enterobacter cloacae</i> KMBC1 | KF481917 | |
| 25 | <i>Enterobacter cloacae</i> KMBM1 | KF481918 | |
| 26 | <i>Enterobacter cloacae</i> KMBB1 | KF481919 | |
| 27 | <i>Enterobacter</i> sp. KMBW1 | KF481920 | |
| 28 | <i>Enterobacter asburiae</i> AAU KMB wheat1 | KJ 577634 | Methane degraders |
| 29 | <i>Bacillus aerius</i> AAU M8 | KC787582 | |
| 30 | <i>Rhizobium</i> sp. AAU M10 | KC787583 | |
| 31 | <i>Bacillus amyloliquefaciens</i> AAU M14 | KC855269 | |
| 32 | <i>Bacillus subtilis</i> AAU M17 | KC787584 | |
| 33 | <i>Bacillus megaterium</i> AAU M29 | KC787585 | |
| 34 | <i>Paenibacillus illinoisensis</i> AAU M 17 | KJ 577634 | Biocontrol agents |
| 35 | <i>Pseudomonas aeruginosa</i> KPSE3 | KC787580 | |
| 36 | <i>Bacillus thuringiensis</i> Abt 10 | KF279356 | |
| 37 | <i>Pseudomonas fluorescens</i> fp 68 | KJ013327 | |
| 38 | <i>Pseudomonas aeruginosa</i> fp 183 | KF647773 | |
| 39 | <i>Providencia vermicola</i> AAU PR1 | KJ161325 | |

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| 40 | <i>Pseudomonas putida</i> AAU PR2 | KJ161326 | Biocontrol agents |
| 41 | <i>Pseudomonas fluorescens</i> AAU PR3 | KJ161327 | |
| 42 | <i>Enterococcus faecium</i> AAU L7 | KJ396073 | Lactic acid bacteria, Compost, Biodegraders |
| 43 | <i>Lactobacillus plantarum</i> AAU L2 | KJ396071 | |
| 44 | <i>Bacillus coagulans</i> AAU L3 | KJ396072 | |
| 45 | <i>Azotobacter chroococcum</i> AAU A 5 | KR361757 | Nitrogen fixers from rice rhizosphere |
| 46 | <i>Rhizobium</i> sp. AAU A 7 | KR361758 | |
| 47 | <i>Rhizobium sphaerophysae</i> AAU A9 | KR361759 | |
| 48 | <i>Azotobacter</i> sp. AAU A 10 | KR361760 | |
| 49 | <i>Azospirillum</i> sp. AAU A 1 | KR706177 | |
| 50 | <i>Azospirillum oryzae</i> AAU A 4 | KR706178 | PGPR & Biodegraders |
| 51 | <i>Sphingomonas aqualitis</i> MPR1 | KX110354 | |
| 52 | <i>Bacillus endophyticus</i> MPR3 | KX110356 | |
| 53 | <i>Streptomyces violaceorabidus</i> MPR2 | KX110355 | PGPR/ Biodegraders from Panchgavya |
| 54 | <i>Pseudomonas stutzeri</i> AAU PG1 | KX358066 | |
| 55 | <i>Bacillus pumilus</i> AAU PG 2 | KX358067 | |
| 56 | <i>Acinetobacter calcoaceticus</i> AAU PG 3 | KX358068 | |
| 57 | <i>Acinetobacter guillouiae</i> AAU PG 4 | KX358069 | Nitrogen fixer – groundnut |
| 58 | <i>Rhizobium</i> sp. COA 1 | KU836508 | |
| 59 | <i>Rhizobium</i> sp. COA 2 | KU836509 | Endophytes of MAP viz. ginger, musli, turmeric, guduchi, ashwagandha |
| 60 | <i>Bacillus tequilensis</i> AAU K1 | MF034733 | |
| 61 | <i>Bacillus endophyticus</i> AAU K2 | MF034734 | |
| 62 | <i>Beijerinckia fluminensis</i> AAU K3 | MF034735 | |
| 63 | <i>Bacillus safensis</i> AAU K4 | MF034736 | |
| 64 | <i>Pseudomonas aeruginosa</i> AAU K5 | MF034737 | Phyllospheric Methylotrophs from paddy |
| 65 | <i>Staphylococcus saprophyticus</i> M 3 | KY090784 | |
| 66 | <i>Bacillus subtilis</i> subsp. <i>Spizizenii</i> M 10 | KY090785 | |
| 67 | <i>Bacillus methylotrophicus</i> M 15 | KY090786 | Potash mobilizers |
| 68 | <i>Acinetobacter pittii</i> KMB-1 | MF614918 | |
| 69 | <i>Acinetobacter oleivorans</i> KMB 2 | MF614919 | |
| 70 | <i>Acinetobacter baumannii</i> KMB 3 | MF614920 | |
| 71 | <i>Acinetobacter calcoaceticus</i> KMB 4 | MF614921 | |
| 72 | <i>Acinetobacter junii</i> KMB 5 | MF614922 | Lignocellulose of rice agro waste degrading bacteria from <i>Beejamrut</i> and <i>Jeevamrut</i> |
| 73 | <i>Rhodococcus equi</i> AAU J1 | MH591220 | |
| 74 | <i>Pseudomonas aeruginosa</i> AAU J2 | MH591221 | |
| 75 | <i>Rhodococcus pyridinivorans</i> AAU J3 | MH591222 | |
| 76 | <i>Bacillus cereus</i> AAU J4 | MH591223 | |
| 77 | <i>Bacillus safensis</i> AAU J5 | MH591224 | |
| 78 | <i>Bacillus safensis</i> AAU J6 | MH591225 | |
| 79 | <i>Bacillus australimaris</i> AAU B1 | MH591226 | |
| 80 | <i>Bacillus tequilensis</i> AAU B2 | MH591227 | |
| 81 | <i>Bacillus subtilis</i> AAU B3 | MH591228 | |
| 82 | <i>Pseudomonas punonensis</i> AAU B4 | MH591229 | |
| 83 | <i>Bacillus zhangzhouensis</i> AAU B5 | MH591230 | Phyllospheric methylotrophs from |
| 84 | <i>Methylobacterium radiotolerans</i> AAU PPFM B 2 | MH586819 | |

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| 85 | <i>Methylobacterium populi</i> AAU PPFM C 7 | MH578621 | Solanaceae (vegetable) crops |
| 86 | <i>Methylobacterium radiotolerans</i> AAU PPFM C 17 | MH578622 | |
| 87 | <i>Methylobacterium populi</i> AAU PPFM C 19 | MH578623 | |
| 88 | <i>Methylobacterium populi</i> AAU PPFM T 2 | MH578624 | |
| 89 | <i>Pseudomonas stutzeri</i> AAU BDCT 1 | MK801245 | Biodecomposer for cotton waste |
| 90 | <i>Bacillus velezensis</i> AAU BDCT 2 | MK801267 | |
| 91 | <i>Streptomyces</i> sp strain AAUBC I 14 | MN577354 | Biocontrol of fungal disease |
| 92 | <i>Streptomyces asenjonii</i> AAUBC M 1 | MN577357 | |
| 93 | <i>Streptomyces cavourensis</i> AAUBC M 14 | MN577358 | |
| 94 | <i>Rhizobium phaseoli</i> AAU B3 | MH701891 | Green gram N fixer |
| 95 | <i>Bacillus cereus</i> AAU B6 | MH701892 | Non <i>Rhizobium</i> endophyte of green gram root nodule |
| 96 | <i>Bacillus tequilensis</i> AAU B12 | MH701893 | |
| 97 | <i>Streptomyces</i> sp. AAUBD M 2 | MN581484 | Biodecomposition of water hyacinth |
| 98 | <i>Streptomyces rochei</i> AAUBD M 10 | MN581673 | |
| 99 | <i>Streptomyces chartreusis</i> AAUBD M 16 | MN582992 | |
| 100 | <i>Trichoderma aggressivum</i> AAU PGPF 2021 | MW888453 | Plant Growth Promoting Fungi |
| 101 | <i>Aspergillus flavipes</i> AAU PGPF 2021 | MW888450 | |
| 102 | <i>Paenarthrobacter ureafaciens</i> AAUATZ 2 | MZ636701 | Atrazine degrading bacteria |
| 103 | <i>Pseudomonas taiwanensis</i> AAUATZ 4 | MZ636704 | |
| 104 | <i>Pseudomonas nitroreducens</i> AAUCP 1 | MZ636705 | Chlorpyrifos degrading bacteria |
| 105 | <i>Pseudomonas alcaligenes</i> AAUCP 3 | MZ636709 | |
| 106 | <i>Pseudomonas stutzeri</i> strain AAUPF 2 | MZ636708 | Profenofos degrading bacteria |
| 107 | <i>Pseudomonas aeruginosa</i> AAUPF 3 | MZ636711 | |
| 108 | <i>Brevundimonas diminuta</i> AAUFP 2 | MZ636712 | Fluopyram degrading bacteria |
| 109 | <i>Brevundimonas faecalis</i> AAUFP 4 | MZ636714 | |
| 110 | <i>Rhizobium pusense</i> AAUGR 421 | MZ636757 | Groundnut N fixer |
| 111 | <i>Cedecea lapagei</i> AAUBD SR 2 | OK036957 | Rice waste lignocellulolytic bacteria |
| 112 | <i>Bacillus cereus</i> AAUBD SR 5 | MZ645948 | |
| 113 | <i>Paenibacillus polymyxa</i> AAUBD SR 8 | MZ645947 | |
| 114 | <i>Lichtheimia ramosa</i> AAUBD SRF 13 | MZ645944 | Rice waste lignocellulolytic fungi |
| 115 | <i>Trichoderma amazonicum</i> AAUBD SRF 17 | MZ645945 | |
| 116 | <i>Talaromyces leycettanus</i> AAUBD SRF 20 | MZ645946 | |
| 117 | <i>Beijerinckia fluminensis</i> AAUZSB A6 | ON080839 | Zinc Solubilizing Bacteria |
| 118 | <i>Pseudomonas taiwanensis</i> AAUZSB AF2 | ON080840 | |
| 119 | <i>Pseudomonas aeruginosa</i> AAUZSB A2 | ON080844 | |
| 120 | <i>Bacillus spizizenii</i> AAUZSB B | ON080845 | |
| 121 | <i>Bacillus tropicus</i> AAU SOB 1 | ON127698 | Sulphur Oxidizing Bacteria |
| 122 | <i>Beijerinckia fluminensis</i> AAU SOB 2 | ON127700 | |
| 123 | <i>Klebsiella variicola</i> AAU SOB 3 | ON127847 | |
| 124 | <i>Priestia</i> sp. strain AAU V1 | OR287447 | Native Salt tolerant PGPB |
| 125 | <i>Cupriavidus</i> sp. strain AAU V2 | OR287481 | |
| 126 | <i>Lysobacter</i> sp. strain AAU V8 | OR287436 | |
| 127 | <i>Chlorella</i> sp. strain AAUBR A | OR457668 | Native heavy metal bioremediator algae |
| 128 | <i>Coelastrella</i> sp. strain AAUBR I | OR453335 | |

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| 129 | <i>Bacillus licheniformis</i> AAU BCM 1 | OR002034 | Native Biocontrol PGPR |
| 130 | <i>Bacillus stratosphericus</i> AAU BCM 2 | OQ998804 | |
| 131 | <i>Pseudomonas aeruginosa</i> AAU BCM 3 | OQ998805 | |
| 132 | <i>Pseudomonas azotoformans</i> AAU BCM 4 | OQ998897 | |
| 133 | <i>Stenotrophomonas</i> sp. AAU BCM 5 | OQ998899 | |