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Landcare Research

Auckland

New Zealand

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Introduction to the Supplement

Since the preparation of the third edition to the ICMP catalogue, published in October 1997, a further 615 strains have been accessioned. These represent 356 bacteria and 259 fungi. The arrangement of this supplement is as reported in the introduction to the catalogue. A plant/micro-organism index and numerical index are included.

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May 1999

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REFERENCE STRAINS

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<i>Pseudomonas syringae</i> pv. <i>broussonetiae</i>	13650
<i>Xanthomonas campestris</i> pv. <i>mori</i>	13199

Bacteria

Acidovorax avenae subsp. *avenae* (Manns 1909) Willems *et al.* 1992

- 13200 *Panicum miliaceum* L. - broomcorn millet. Brazil. From IBSBF 1228 ← V.A. Malavolta Jr.
13129 * *Saccharum officinarum* L. - sugarcane cv. CP51-21 - red stripe of leaf. Australia Jan 1996. From A. Wen AW9613 (120196I-1) - *millet (Wen).
13130 * *Saccharum officinarum* L. - sugarcane cv. CP51-21 - red stripe of leaf. Australia Feb 1996. From A. Wen AW9622 (050296II-1) - *millet (Wen).
13131 * *Saccharum officinarum* L. - sugarcane cv. CP51-21 - red stripe of leaf. Australia Jan 1996. From A. Wen AW9614 (120196II-2) - rec. as *A. avenae* subsp. *cattleyae* - *millet (Wen).
13132 * *Saccharum officinarum* L. - sugarcane cv. CP51-21 - red stripe of leaf. Australia Feb 1996. From A. Wen AW9621 (050296I-1) - rec. as *A. avenae* subsp. *cattleyae* - *millet (Wen).
13133 * Brown streak of leaf. Australia Mar 1996. From A. Wen AW9632 (13031) - rec. as *A. avenae* subsp. *cattleyae* - *millet, sugarcane (Wen).

Acidovorax avenae subsp. *cattleyae* (Pavarino 1911) Willems *et al.* 1992

- 13306 Orchid (undetermined species). Brazil 1996. From IBSBF 1244 ← J.R. Neto.
13307 Orchid (undetermined species). Brazil 1996. From IBSBF 1245 ← J.R. Neto.
13308 Orchid (undetermined species). Brazil 1996. From IBSBF 1248 ← V.A. Malavolta Jr.

Acidovorax avenae subsp. *citrullii* (Schaad *et al.* 1978) Willems *et al.* 1992

- 13134 * *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon cv. All Heart - fruit blotch. Australia Jan 1996. From A. Wen ← R. O'Brien 4391 - *watermelon, rockmelon (Wen).
13135 * *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon cv. Mini-Lee - seedling spots. Australia Feb 1996. From A. Wen ← R. O'Brien 4412 - *watermelon, rockmelon (Wen).
13136 *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon cv. Red Tiger - seedling blotch. Australia Feb 1996. From A. Wen ← R. O'Brien 4422.
13137 *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon. Australia Feb 1996. From A. Wen ← R. O'Brien 4425.
13138 *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon cv. Mini-Lee - seedling leaf blotch. Australia Feb 1996. From A. Wen AW9624 (M2302-3).
13309 *Citrullus lanatus* (Thunb.) Matsum. & Nakai - watermelon. Brazil 1997. From IBSBF 1302 ← I.M.G. Almeida.
13201 *Cucumis melo* L. Brazil 1996. From IBSBF 1225 ← C.F. Robbs.

Acidovorax delafieldii (Davis 1970) Willems *et al.* 1990

- 13113 River sediment. Heathcote River, MC, NZ 1991. From J. Aislabie IQ2 - Can. J. Microbiol. 40: 555-560, 1994 - utilises isoquinoline as sole source of carbon and nitrogen.

Acidovorax sp.

- 13404 *Anthurium* sp. - leaf. France 1991. From CFBP 3232 ← P. Prior PIG31 - rec. as *Acidovorax anthurii* (CFBP).
13405 *Anthurium* sp. - leaf. France 1991. From CFBP 3240 ← P. Prior P4630 - rec. as *Acidovorax anthurii* (CFBP).
13406 *Valerianella locusta* (L.) Laterr. - common corn-salad, lamb's lettuce - cotyledon. France 1993. From L. Gardan 11085 ← B. Rat V2-1C - rec. as *Acidovorax valerianellae* (Gardan).
13407 *Valerianella locusta* (L.) Laterr. - common corn-salad, lamb's lettuce - leaf. France 1992. From L. Gardan 10715 ← B. Rat M41 - rec. as *Acidovorax valerianellae* (Gardan).

?*Acidovorax* sp.

- 13114 a Oil contaminated soil. USA 1988. From J. Aislabie IQ1 = ATCC 55082 - Can. J. Microbiol. 40: 555-560, 1994 and Appl. Environ. Microbiol. 55: 3247, 1989.

?*Acinetobacter* sp.

- 12990 *Dianthus caryophyllus* L. - carnation - leaf. Port Hills, MC, NZ. From K. Knight 1287 - identified by Biolog.

Agrobacterium sp.

- 13526 *Craspedia incana* Allan - root gall. Lake Lyndon, MC, NZ 1997. From K. Knight 2199 - possibly *A. tumefaciens*.
13528 ? Lagoon. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP004 - degrades phenanthrene - rec. as *A. radiobacter*.

Azorhizobium caulinodans Dreyfus *et al.* 1988

- 13637 a From USDA 4892 - Type strain.

Bacillus thuringiensis Berliner 1915 serotype *colmari*

- 13226 From A. Broadwell ← H. de Barjac - reference strain.

Bacillus thuringiensis Berliner 1915 serotype *galleriae*

- 13227 Soil - Auckland, AK, NZ 1994. From J.M. Young BdR26 ← A. Broadwell.
13229 Soil - Rotorua, BP, NZ 1988. From J.M. Young HA5 ← Hort Research H779 ← A. Broadwell.

Bacillus thuringiensis Berliner 1915 serotype *indiana*

- 13230 Soil - Napier, HB, NZ 1988. From J.M. Young H28 ← Hort Research H1748 ← A. Broadwell.
13231 Mouse cage litter - Auckland, AK, NZ 1988. From J.M. Young H30 ← Hort Research H2635 ← A. Broadwell.
13232 Compost - Auckland, AK, NZ 1988. From J.M. Young H31 ← Hort Research H3386 ← A. Broadwell.
13233 Poultry litter - Massey, AK, NZ 1988. From J.M. Young H32 ← Hort Research H4951 ← A. Broadwell.
13234 Compost - New Plymouth, NZ 1988. From J.M. Young H33 ← Hort Research H5891 ← A. Broadwell.

- 13235 Soil, Opitio Bay, CL, NZ 1988. From J.M. Young ← Hort Research H3547 ← A. Broadwell.
- Bacillus thuringiensis* Berliner 1915 serotype *israeliensis*
13236 NZ. From J.M. Young H21 ← Hort Research H73 ← A. Broadwell.
- Bacillus thuringiensis* Berliner 1915 serotype *japonensis*
13237 From A. Broadwell ← H. de Barjac - reference strain.
- Bacillus thuringiensis* Berliner 1915 serotype *kurstaki*
13239 Soil - Oamaru, DN, NZ 1988. From J.M. Young H13 ← Hort Research H1478 ← A. Broadwell.
13240 Compost - Auckland, AK, NZ 1988. From J.M. Young H23 ← Hort Research H754 ← A. Broadwell.
13242 Soil - Taupo, TO, NZ 1988. From J.M. Young H34 ← Hort Research H6086 ← A. Broadwell.
- Bacillus thuringiensis* Berliner 1915 serotype *wuhanensis*
13245 From A. Broadwell ← H. de Barjac - reference strain.
- Bacillus thuringiensis* Berliner 1915 serotype *yunnanensis*
13246 From A. Broadwell ← H. de Barjac - reference strain.
- Bradyrhizobium elkani* Kuykendall *et al.* 1993
13638 *Glycine max* (L.) Merr. - soybean. USA 1956. From USDA 76 - serogroup 76 - Type strain.
- Bradyrhizobium liaoningense* Xu *et al.* 1995
13639 From USDA 3622 - Type strain.
- Burkholderia gladioli* (Severini 1913) Yabuuchi 1993
13695 *Dendrobium* sp. Brazil 1998. From IBSBF 1379 ← I.M.G. Almeida.
- Burkholderia gladioli* pv. *alliiicola* (Burkholder 1942) Young *et al.* 1996
13206 *Allium cepa* L. - onion. Brazil 1995. From IBSBF 1195 ← I.M.G. Almeida ← J.O.M. Menten.
- Burkholderia solanacearum* (Smith 1896) Yabuuchi *et al.* 1993
13692 *Lycopersicon esculentum* Mill. - tomato - browning of stem vascular system. Vanuatu Oct 1998. From J.M. Young 3978A.
13693 *Lycopersicon esculentum* Mill. - tomato - browning of stem vascular system. Vanuatu Oct 1998. From J.M. Young 3978B.
13208 *Marsypianthes* sp. (as *M. chamaedris*). Brazil 1994. From IBSBF 1148 ← C.A. Lopes 128.
13122 a* *Solanum tuberosum* L. - potato cv. Pashandi - vascular necrosis of tuber and wilting. Iran. From H. Rahimian Shi263 ← M. Bagheri - Bagheri, M. 1994. MS Thesis - biovar II - *potato (Rahimian).
13694 *Solanum tuberosum* L. - potato - browning of stem vascular system with soft rotting of stem cortex. Vanuatu Oct 1998. From J.M. Young 3979.
- Burkholderia* sp.
13529 ? Lagoon sediment. Rotowaro, WO, NZ Mar 1995. From A. Laurie RP007 - degrades phenanthrene, naphthlene.
- Clavibacter michiganensis* subsp. *michiganensis* (Smith 1910) Davis *et al.* 1984
13696 *Capsicum annum* L. - sweet pepper. Brazil 1998. From IBSBF 1402 ← V.A. Malavolta Jr.
- Clavibacter* sp.
13686 *Euphorbia pulcherrima* Willd. ex Klotsch. - poinsettia - stem blisters. UK 1985. From NCPPB 3359 ← J.E. Sellwood A2166.
13198 *Lycopersicon esculentum* Mill. - tomato - stained vascular tissue of collapsed plant. Blenheim, MB, NZ Oct 1996. From K. Knight 1781 - gram +ve (Knight).
- Comamonas acidovorans* (den Dooren de Jong 1926) Tamaoka *et al.* 1987
13115 a River sediment. Heathcote River, MC, NZ 1991. From J. Aislabie IQ3 - Can. J. Microbiol. 40: 555-560, 1994 - utilises isoquinoline as sole source of carbon and nitrogen.
13635 From ATCC 9355 ← P.H. Gray.
- Comamonas terrigena* (Hugh 1962) De Vos *et al.* 1985
13634 a Hay infusion filtrate. From ATCC 8461 ← NCTC 1937 ← S. Mudd = LMG 1253: NCIB 8193 - Type strain.
- Comamonas* sp.
13116 a Evaporation pond. Australia 1989. From J. Aislabie IQ4 - Can. J. Microbiol. 40: 555-560, 1994 - utilises isoquinoline as sole source of carbon and nitrogen.
- Curtobacterium flaccumfaciens* pv. *flaccumfaciens* (Hedges 1922) Collins & Jones 1983
13697 *Phaseolus vulgaris* L. - bean. Brazil 1996. From IBSBF 1206 ← A.C. Maringoni F2500.
13698 *Phaseolus vulgaris* L. - bean. Brazil 1996. From IBSBF 1207 ← A.C. Maringoni F2501.
13699 *Phaseolus vulgaris* L. - bean. Brazil 1996. From IBSBF 1210 ← A.C. Maringoni F2502.
- Erwinia amylovora* (Burrill 1882) Winslow *et al.* 1920
13293 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor 16a ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis - *apple seedling, pear fruit (Taylor).
13294 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor 16d ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis - *apple seedling, pear fruit (Taylor).

- 13295 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor 16B ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis - *apple seedling, pear fruit (Taylor).
- 13296 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor 16C ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis - *apple seedling, pear fruit (Taylor).
- 13297 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor AG008A ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis; CCT media - *apple seedling, pear fruit (Taylor).
- 13298 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor AG009C ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis; CCT media - *apple seedling, pear fruit, (Taylor).
- 13299 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor AG0031A ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis; CCT media - *apple seedling, pear fruit (Taylor).
- 13300 * *Cotoneaster* sp. - stem and branch. Australia May 1997. From R.K. Taylor AG0033B ← C.N. Hale - Homologous with DNA of ICMP 1501; PCR analysis; CCT media - *apple seedling, pear fruit (Taylor).
- 13549 *Cotoneaster* sp. Hope, NN, NZ Jan 1998. From R.K. Taylor ← M. Braithwaite 185 - PCR with specific primers to *E. amylovora*, CCT medium.
- 13416 * *Cydonia oblonga* Mill. - quince - shoot blight. Hungary Jun 1996. From J. Nemeth 910 ← A. Kovacs 212/96B - *pear slices (Nemeth).
- 13412 * *Malus X domestica* Borkh. - apple cv. Idared - canker on twig. Hungary Apr 1996. From J. Nemeth 891 (36/22/96B) - *pear blossom, pear slices (Nemeth).
- 13415 * *Malus X domestica* Borkh. - apple cv. Jonathan - shoot blight. Hungary Jun 1996. From J. Nemeth 909 ← A. Kovacs 210/96B - *pear slices (Nemeth).
- 13417 * *Mespilus germanica* L. - medlar - shoot blight. Hungary Jul 1996. From J. Nemeth 931 (423/02/96B) - *pear slices (Nemeth).
- 13547 *Photinia* sp. Blenheim, MB, NZ Jan 1998. From R.K. Taylor ← M. Braithwaite 250 - PCR with specific primers to *E. amylovora*, CCT medium.
- 13548 *Photinia* sp. Blenheim, MB, NZ Jan 1998. From R.K. Taylor ← M. Braithwaite 249 - PCR with specific primers to *E. amylovora*, CCT medium.
- 13290 * *Pyrus communis* L. - pear cv. Bartlett. Japan Jun 1996. From R.K. Taylor ← R. Roberts 223 - may be a new pathovar/subspecies - *pear (Taylor).
- 13413 * *Pyrus communis* L. - pear - blossom blight. Hungary May 1996. From J. Nemeth 898 (94/11/96B) - *pear blossom, pear slices (Nemeth).
- 13414 * *Sorbus aria* (L.) Crantz - white beam, mountain ash - shoot blight. Hungary Jun 1996. From J. Nemeth 906 (134/03/96B) - *pear slices (Nemeth).
- 13247 * Pear cv. Mishirazu. Japan Aug 1995. From R.K. Taylor ← R. Roberts 1a - may be a new pathovar/subspecies - *pear (Taylor).
- 13248 * Pear cv. Mishirazu. Japan Aug 1995. From R.K. Taylor ← R. Roberts 41 - may be a new pathovar/subspecies - *pear (Taylor).
- 13249 * Pear cv. Mishirazu. Japan Aug 1995. From R.K. Taylor ← R. Roberts 71 - may be a new pathovar/subspecies - *pear (Taylor).
- 13250 * Pear cv. Mishirazu. Japan Aug 1995. From R.K. Taylor ← R. Roberts 101 - to be published as a new pathovar/subspecies - *pear (Taylor).
- 13251 * Pear cv. Mishirazu. Japan Aug 1995. From R.K. Taylor ← R. Roberts 139 - may be a new pathovar/subspecies - *pear (Taylor).
- 13252 * Pear cv. Chinese Pear. Japan Jun 1996. From R.K. Taylor ← R. Roberts 144 - may be a new pathovar/subspecies - *pear (Taylor).
- 13253 * Pear cv. Chinese Pear. Japan Jun 1996. From R.K. Taylor ← R. Roberts 169 - may be a new pathovar/subspecies - *pear (Taylor).
- 13254 * Pear cv. Brandywine. Japan Jun 1996. From R.K. Taylor ← R. Roberts 189 - may be a new pathovar/subspecies - *pear (Taylor).
- 13288 * Pear cv. Brandywine. Japan Jun 1996. From R.K. Taylor ← R. Roberts 194 - may be a new pathovar/subspecies - *pear (Taylor).
- 13289 * Pear cv. Brandywine. Japan Jun 1996. From R.K. Taylor ← R. Roberts 209 - may be a new pathovar/subspecies - *pear (Taylor).

Erwinia carotovora subsp. *carotovora* (Jones 1901) Bergey *et al.* 1923

- 13310 *Aphelandra squarrosa* Nees - zebra plant. Brazil 1996. From IBSBF 1298 ← I.M.G. Almeida.
- 13202 *Diffenbachia maculata* (C. & G. Lodd.) G. Don. Brazil 1986. From IBSBF 1237 ← V.A. Malavolta Jr.
- 13311 *Hippeastrum X hybridum* - amaryllis. Brazil 1997. From IBSBF 1303 ← I.M.G. Almeida.
- 13141 *Lycopersicon esculentum* Mill. - tomato - stem. Horotane Valley, MC, NZ Sep 1996. From H. Pearson 1664.
- 13700 *Zantedeschia aethiopica* (L.) Spreng. - arum lily. Brazil 1997. From IBSBF 1348 ← I.M.G. Almeida.

Erwinia chrysanthemi Burkholder *et al.* 1953

- 13312 *Zingiber officinale* Rosc. - ginger. Brazil 1996. From IBSBF 1292 ← I.M.G. Almeida.

Erwinia herbicola (Lohnis 1911) Dye 1964

- 13301 a *Malus X domestica* Borkh. - apple cv. Golden Delicious - blossom. Loburn, NC, NZ Nov 1989. From L. Kearns 1087 - J. Appl. Bact. 81: 369-374, 1996 - non-pathogenic (Kearns) - inhibitory to *Erwinia amylovora* in immature pear fruit.

Erwinia psidii Neto *et al.* 1987

- 13313 *Psidium guajava* L. - yellow guava. Brazil 1996. From IBSBF 1295 ← I.M.G. Almeida.
- 13701 *Psidium guajava* L. - yellow guava. Brazil 1997. From IBSBF 1347 ← J.R. Neto.

Erwinia salicis (Day 1924) Chester 1939

- 13390 * *Salix* sp. - willow - fluid from xylem vessels. Belgium 1995. From L. Vauterin IBW95052 ← M. Steenackers - *willow (Vauterin).
- 13391 * *Salix* sp. - willow - fluid from xylem vessels. Belgium 1995. From L. Vauterin IBW95053 ← M. Steenackers - *willow (Vauterin).
- 13392 * *Salix* sp. - willow - fluid from xylem vessels. Belgium 1995. From L. Vauterin IBW95054 ← M. Steenackers - *willow (Vauterin).
- 13393 * *Salix* sp. - willow - fluid from xylem vessels. Belgium 1995. From L. Vauterin IBW95055 ← M. Steenackers - *willow (Vauterin).

Erwinia sp.

- 13550 *Petroselinum crispum* (Mill.) A.W. Hill - parsley - soft rot of plant crown. Pukekohe, AK, NZ Mar 1998. From P.G. Broadhurst.

Hydrogenophaga palleroni (Davis *et al.* 1970) Willems *et al.* 1989

- 13636 a From ATCC 17724 ← R.Y. Stanier 362 ← D. Davis 1-6-1 - Type strain.

Mesorhizobium ciceri Nour *et al.* 1994

- 13641 a From USDA 3383 - rec. as *Rhizobium ciceri* - Type strain.

Mesorhizobium mediterraneum (Nour *et al.* 1994) Jarvis *et al.* 1997

- 13644 a From USDA 3392 - rec. as *Rhizobium mediterraneum* - Type strain.

Mesorhizobium plurifarum De Lajudie *et al.* 1998

13640 a From USDA 3707 - Type strain.

Mycobacterium sp.

- 13117 a Sediment near oilfield. USA. From J. Aislabie Pyr1 ← C. Cerniglia - Appl. Environ. Microbiol. 54: 1612-1614, 1988 - Metabolises pyrene, fluoranthrene, phenanthrene, naphthalene.
- 13213 Bioremediation lagoon liquid with pyrene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RPy001 - gold pigment - utilises dodecane, hexadecane, phenanthrene, fluorene, fluoranthene and pyrene.
- 13214 Stream sediment with pyrene. Rotowaro Stream, WO, NZ Mar 1995. From G. Lloyd-Jones RPy002 - gold pigment - utilises dodecane, hexadecane, fluoranthene, and pyrene.
- 13215 Lagoon liquid with pyrene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RPy02 - gold pigment - utilises dodecane, hexadecane, phenanthrene, fluorene, fluoranthene and pyrene.
- 13216 Lagoon liquid with fluoranthene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RF002 - yellow pigment - utilises dodecane, hexadecane, phenanthrene, fluorene, fluoranthene and pyrene.
- 13217 Contaminated soil with fluoranthene. Waipa Sawmill, Rotorua, BP, NZ Aug 1994. From G. Lloyd-Jones WF2 - orange pigment - utilises dodecane, hexadecane and fluoranthene.
- 13218 Stream sediment with fluoranthene. Rotowaro Stream, WO, NZ Mar 1995. From G. Lloyd-Jones RF01 - orange pigment - utilises dodecane, hexadecane and fluoranthene.
- 13219 Stream sediment with fluoranthene. Rotowaro Stream, WO, NZ Mar 1995. From G. Lloyd-Jones RF004 - orange pigment - utilises dodecane, hexadecane, naphthalene, biphenyl, fluorene, fluoranthene and phenol.
- 13220 Lagoon sediment with fluoranthene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RF006 - orange pigment - utilises dodecane, hexadecane, naphthalene, biphenyl, fluorene, fluoranthene and phenol.
- 13221 Soil with fluoranthene. Waipa Sawmill, Rotorua, BP, NZ Mar 1995. From G. Lloyd-Jones WF001 - orange pigment - utilises dodecane, hexadecane, biphenyl, phenanthrene and fluoranthene.
- 13222 Lagoon water with fluoranthene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RF001 - orange pigment - utilises dodecane, hexadecane, phenanthrene, fluorene and fluoranthene.
- 13223 Lagoon liquid with fluoranthene. Rotowaro Lagoon, WO, NZ Mar 1995. From G. Lloyd-Jones RF02 - orange pigment - utilises dodecane, hexadecane, phenanthrene, fluorene and fluoranthene.
- 13224 Stream sediment with fluoranthene. Rotowaro Stream, WO, NZ Mar 1997. From G. Lloyd-Jones RF003 - orange pigment, utilises dodecane, hexadecane, naphthalene, biphenyl, fluorene, fluoranthene and phenol.
- 13225 Stream sediment with fluoranthene. Rotowaro Stream, WO, NZ Mar 1995. From G. Lloyd-Jones RF005 - orange pigment - utilises dodecane, hexadecane, naphthalene, biphenyl, fluoranthene and phenol.
- 13592 Stream. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RPy01 - degrades phenanthrene.
- 13593 Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RPy004 - degrades pyrene.

Nitrobacter winogradskyi Winslow *et al.* 1917

13140 From NCIMB 11846 ← ATCC 25391 ← Lees 1 - Type strain.

Nitrosomonas europaea Winogradsky 1892

13139 From NCIMB 11850 ← ATCC 25978 ← D. Pramer - Type strain.

Pseudomonas aeruginosa (Schoeter 1872) Migula 1900

13118 a Oil contaminated soil. USA 1987. From J. Aislabie NG2D = ATCC 55083 - Appl. Environ. Microbiol. 54: 2197-2202, 1988 - degrades alkyl nitriles (low and high molecular weight).

Pseudomonas aureofaciens Kluyver 1956

- 13610 a Maas River clay in kerosene. From ATCC 13985 ← NRRL B-1576 ← H. Bouman - Type strain.
- 13611 Soil. USA. From ATCC 17415 ← R.Y. Stanier 36 ← NRRL B-1482R.
- 13612 Lake water. From ATCC 17418 ← R.Y. Stanier 40 ← NRRL B-1855.

Pseudomonas chlororaphis (Guignard & Sauvageau 1894) Bergey *et al.* 1930

- 13613 a Plate contaminant. From ATCC 9446 ← NRRL B-560 ← W. Schmidt = IFO 3904: NCIB 9392 - Type strain.
- 13614 Soil. From ATCC 17810 ← R.Y. Stanier 389 ← NRRL B-1854.
- 13615 Soil. From ATCC 17812 ← R.Y. Stanier 391 ← NRRL B-1869.

Pseudomonas cichorii (Swingle 1925) Stapp 1928

- 13314 *Arracacia xanthorrhiza* E.N.Bancr. Brazil 1996. From IBSBF 1297 ← I.M.G. Almeida.
- 13205 *Cucumis melo* L. Brazil 1996. From IBSBF 1274 ← I.M.G. Almeida.
- 13203 *Murraya paniculata* (L.) Jack - orange jasmine. Brazil 1995. From IBSBF 1175 ← I.M.G. Almeida.
- 13204 *Phylodendron* sp. Brazil 1996. From IBSBF 1262 ← I.M.G. Almeida.

Pseudomonas flavescens Hildebrand *et al.* 199413539 a *Juglans regia* L. - walnut - canker. USA. From ATCC 51555 ← D.C. Hildebrand B62 - Int. J. Syst. Bact. 44: 410-415, 1994 - Type strain.*Pseudomonas fluorescens* Migula 1895

- 13627 *Dahlia* sp. UK. From ATCC 17816 ← R.Y. Stanier 401 ← H. Lautrop PJ187 = IFO 15831 - biotype B.
- 13119 Oil contaminated soil. USA 1987. From J. Aislabie PICN = ATCC 55084 - degrades alkyl nitriles (preferential degradation of low molecular weight compounds <C13).
- 13594 Antarctica Feb 1995. From J. Aislabie Ant5 - degrades naphthalene.
- 13616 From ATCC 12983 ← R. Hugh 1291 ← W. Hugo LA = IFO 15837: NRRL B-1864 - biotype F.
- 13617 From ATCC 15916 ← IAM 1008 ← IFM, Chiba University AHH27 - biotype G.
- 13618 From ATCC 17467 ← R.Y. Stanier 93 ← S.H. Hunter TR10 - biotype B.
- 13619 From ATCC 17482 ← R.Y. Stanier 108 ← W. Sistrof 52-22 = IFO 15832 - biotype B.
- 13620 Hydrocarbon enrichment. USA. From ATCC 17513 ← R.Y. Stanier 143 ← D. Loeb PL = IFO 15836 - biotype F.
- 13621 Soil. USA. From ATCC 17518 ← R.Y. Stanier 149 ← H. Stolp = IFO 15838 - biotype G.

- 13622 From ATCC 17555 ← R.Y. Stanier 187 ← H. Lautrop PJ139 = NCPPB 263 - biotype A.
 13623 From ATCC 17556 ← R.Y. Stanier 188 ← H. Lautrop PJ160 = NCPPB 316 - biotype A.
 13624 From ATCC 17559 ← R.Y. Stanier 191 ← M. Rhodes 22-1 = IFO 15834 - biotype C.
 13625 From ATCC 17561 ← R.Y. Stanier 194 ← H. Lautrop PJ253 - biotype C.
 13626 Well water. From ATCC 17579 ← R.Y. Stanier 212 ← H. Lautrop PJ832 - biotype C.
 13628 Lake water. USA. From ATCC 49667 ← L.R. Maki F12 - biotype G.

Pseudomonas marginalis (Brown 1918) Stevens 1925

- 13054 *Lactuca sativa* L. - lettuce - leaf lesions. Pukekohe, AK, NZ Aug 1996. From P.G. Broadhurst A.
 13055 *Lactuca sativa* L. - lettuce - leaf lesions. Pukekohe, AK, NZ Aug 1996. From P.G. Broadhurst B.

Pseudomonas marginalis pv. *marginalis* (Brown 1918) Stevens 1925

- 13207 *Lactuca sativa* L. - lettuce. Brazil 1996. From IBSBF 1242 ← C.F. Robbs.

Pseudomonas mendocina Palleroni 1970

- 13540 Soil enrichment with ethanol as carbon source. From ATCC 25411 ← N.J. Palleroni CH50 - J. Gen. Microbiol. 60: 215-231, 1970 - Type strain.

Pseudomonas putida (Trevisan 1889) Migula 1895

- 13597 Antarctica Feb 1995. From J. Aislabie Ant11 - degrades toluene.
 13629 From ATCC 17392 ← R.Y. Stanier 7 - biotype A.
 13630 Soil. From ATCC 17472 ← R.Y. Stanier 98 = NCIB 11772 - biotype B.
 13631 Soil. From ATCC 17494 ← R.Y. Stanier 122 ← Shilo - biotype A.
 13632 Soil. From ATCC 17522 ← R.Y. Stanier 153 ← M. Starr Davis2440-13 - biotype B.
 13633 Soil. From ATCC 17527 ← R.Y. Stanier 158 ← M.P. Starr 2440-176 - biotype B.

Pseudomonas resinovorans Delaporte *et al.* 1961

- 13541 a From ATCC 14235 ← B. Delaporte - Type strain.

Pseudomonas savastanoi (ex Smith 1908) Gardan *et al.* 1992

- 13771 * *Fraxinus* sp. - ash. Italy 1992. From L. Mugnai ← E. Surico FR4 - *olive, ash (Surico).
 13766 * *Nerium oleander* L. - oleander. Italy 1998. From L. Mugnai ← E. Surico OLV98 - *olive, oleander (Surico).
 13546 *Nerium oleander* L. - oleander. Italy. From N. Iacobellis ITM519.
 13751 * *Nerium oleander* L. - oleander. Italy 1998. From L. Mugnai ← E. Surico OLM98 - *olive, oleander (Surico).
 13752 * *Nerium oleander* L. - oleander. Italy 1998. From L. Mugnai ← E. Surico OLS98 - *olive, oleander (Surico).
 13768 * *Nerium oleander* L. - oleander. USA 1981. From L. Mugnai ← E. Surico PvFi305 - *olive, oleander (Surico).
 13769 * *Nerium oleander* L. - oleander. Italy 1982. From L. Mugnai ← E. Surico PvFi310 - *oleander, olive (Surico).
 13545 *Olea europaea* L. - olive. Italy. From N. Iacobellis ITM317.

Pseudomonas savastanoi pv. *phaseolicola* (Burkholder 1926) Gardan *et al.* 1992

syn. *Pseudomonas syringae* pv. *phaseolicola* (Burkholder 1926) Young *et al.* 1978

- 13408 * *Vigna radiata* (L.) R.Wilcz. - mung bean - leafspot. Hungary Sep 1993. From J. Nemeth 30 (MUN2) - LOPAT Ia - *mung bean (Nemeth).
 13409 * *Vigna radiata* (L.) R.Wilcz. - mung bean - leafspot. Hungary Sep 1993. From J. Nemeth 32 (MUN4) - LOPAT Ia - *mung bean (Nemeth).
 13410 * *Vigna radiata* (L.) R.Wilcz. - mung bean - leafspot. Hungary Sep 1993. From J. Nemeth 34 (MUN11) - LOPAT Ia - *mung bean (Nemeth).
 13411 * *Vigna radiata* (L.) R.Wilcz. - mung bean - halo blight. Hungary Jul 1994. From J. Nemeth 800 (N18) - LOPAT Ia - *mung bean (Nemeth).

Pseudomonas savastanoi pv. *savastanoi* (ex Smith 1908) Gardan *et al.* 1992

- 13400 *Olea europaea* L. - olive - gall. MB, NZ 1997. From K. Knight 1545 - weakly fluorescent - LOPAT --.+ (Knight).
 13519 *Olea europaea* L. - olive cv. Frantoio - knot, 1cm diameter on stem. Marlborough, MB, NZ Dec 1997. From J.M. Young 3965A1 - plants from quarantine.
 13520 *Olea europaea* L. - olive cv. Frantoio - knot, 1cm diameter on stem. Marlborough, MB, NZ Dec 1997. From J.M. Young 3965B1 - plants from quarantine.
 13521 *Olea europaea* L. - olive cv. Frantoio - knot, 1cm diameter on stem. Marlborough, MB, NZ Dec 1997. From J.M. Young 3965C1 - plants from quarantine.

Pseudomonas sp.

- 13292 *Magnolia* sp. - magnolia - leaf. Mt Albert, AK, NZ Feb 1997. From J.M. Young 3963 Mag.
 13425 a Israel. From J. Aislabie ← R.T. Mandelbaum adp - Appl. Environ. Microbiol. 61: 1451-1457, 1995.
 13530 ?a Stream. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP001 - Appl. Env. Microbiol. 63: 3286-3290, 1997 - degrades phenanthrene.
 13531 ? Stream water. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP002 - degrades phenanthrene.
 13532 ? Stream sediment. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP005 - degrades phenanthrene.
 13596 Antarctica Feb 1995. From J. Aislabie Ant10 - degrades toluene - identified by API20.
 13600 Jet fuel (JP8). Antarctica Feb 1995. From J. Aislabie Ant30.

Pseudomonas stutzeri (Lehmann & Neumann 1896) Sijderius 1946

- 13595 Antarctica Feb 1995. From J. Aislabie Ant9 - degrades naphthalene.

Pseudomonas syringae van Hall 1902

- 13094 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4284 ← J.L. Gagnard JE71-29.
 13095 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4285 ← J.L. Gagnard JE72-2.

- 13096 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4286 ← J.L. Gaignard JE111-2B.
 13097 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4287 ← J.L. Gaignard JE112-4.
 13098 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4288 ← J.L. Gaignard JE112-8B.
 13100 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4290 ← J.L. Gaignard JE117-13.
 13101 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4291 ← J.L. Gaignard JE120-10.
 13102 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4292 ← J.L. Gaignard JE135-1B.
 13103 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4293 ← J.L. Gaignard JE135-9.
 13609 *Beta vulgaris* L. - beetroot - leafspot. Ashburton, MC, NZ Jun 1998. From K. Knight 98-1088 - LOPAT...+.
 13099 *Vitis vinifera* L. - grape. France 1985. From CFBP 4289 ← J.L. Gaignard JE113-2.

Pseudomonas syringae pv. *berberidis* (Thornberry & Anderson 1931) Young *et al.* 1978

- 13291 *Berberidis* sp. - barberry - angular leafspot. Te Puke, BP, NZ Dec 1995. From J.M. Young 3947 - LOPAT I.

Pseudomonas syringae pv. *broussonetiae* Takahashi *et al.* 1996

- 13650 a *Broussonetia kazinoki* Sieb. X *Broussonetia papyrifera* Vent. - paper mulberry - necrotic lesion on shoot. Japan 1980. From M. Sato Koz8101 - Ann. Phytopath. Soc. Japan 62: 17-22, 1996 - Pathotype strain.
 13684 a *Broussonetia kazinoki* Sieb. X *Broussonetia papyrifera* Vent. - paper mulberry - necrotic lesion of crown. Japan 1980. From M. Sato Koz8104 - Ann. Phytopath. Soc. Japan 62: 17-22, 1996.
 13685 a *Broussonetia kazinoki* Sieb. X *Broussonetia papyrifera* Vent. - paper mulberry - necrotic lesion on leaf. Japan 1985. From M. Sato Koz8501 - Ann. Phytopath. Soc. Japan 62: 17-22, 1996.

Pseudomonas syringae pv. *delphinii* (Smith 1904) Young *et al.* 1978

- 13052 *Delphinium* sp. - leafspot. Pukekohe, AK, NZ Jul 1996. From P.G. Broadhurst A.
 13053 *Delphinium* sp. - leafspot. Pukekohe, AK, NZ. From P.G. Broadhurst B.

Pseudomonas syringae pv. *maculicola* (McCulloch 1911) Young *et al.* 1978

- 13051 *Brassica oleracea* L. var. *capitata* L. - cabbage. NZ Jul 1996. From K. Knight 1380.

Pseudomonas syringae pv. *pisi* (Sackett 1916) Young *et al.* 1978

- 13394 a *Pisum sativum* L. - pea cv. Allround. UK 1991. From A. Vivian HRI4298 - Physiol. Mol. Pl. Pathol. 49: 233-245, 1996 - non-fluorescent - race 7.
 13395 *Pisum sativum* L. - pea cv. Allround - seed. UK 1991. From A. Vivian HRI4300 - non-fluorescent - race 7.
 13396 *Pisum sativum* L. - pea cv. Bikini - seed. UK 1991. From A. Vivian HRI4409 - non-fluorescent - race 7.
 13397 *Pisum sativum* L. - pea cv. Allround - seed. UK 1991. From A. Vivian HRI4426 - non-fluorescent - race 7.
 13398 a *Pisum sativum* L. - pea cv. Allround. UK 1991. From A. Vivian HRI4466 - Physiol. Mol. Pl. Pathol. 49: 233-245, 1996 - non-fluorescent - race 7.

Pseudomonas syringae pv. *syringae* van Hall 1902

- 13591 *Morus* sp. - leafspot & stem canker. Aokautere, WI, NZ May 1998. From C.F. Hill LYN16502.
 13318 *Prunus armeniaca* L. - apricot cv. Trevatt - dieback of branches. Cromwell, CO, NZ Sep 1997. From H. Pearson 1357-P18 - MAF stone fruit survey.
 13319 *Prunus armeniaca* L. - apricot cv. Trevatt - gumming of branches. Cromwell, CO, NZ Sep 1997. From H. Pearson 1357-P19 - MAF stone fruit survey.
 13320 *Prunus armeniaca* L. - apricot cv. Clutha Sun - dieback of branch tips. Earnsclough, CO, NZ Sep 1997. From H. Pearson 1356-P6 - MAF stone fruit survey.
 13387 *Prunus armeniaca* L. - apricot cv. Kerrs - dieback of branches. Alexandra, CO, NZ Sep 1997. From H. Pearson 1353-P13 - MAF stone fruit survey.
 13388 *Prunus armeniaca* L. - apricot cv. Moorpark - gumming on branch. Roxburgh, CO, NZ Sep 1997. From H. Pearson 1352-P21 - MAF stone fruit survey.
 13389 *Prunus armeniaca* L. - apricot cv. Clutha Sun - gumming of twigs and branches. Earnsclough, CO, NZ Sep 1997. From H. Pearson 1356-P10 - MAF stone fruit survey.
 13516 a* *Pyrus calleryana* Decne. - ornamental pear cv. Aristocrat - stem tip dieback and canker. USA Jun 1991. From G.W. Sundin 7B40 - Plasmid 35: 98-107 - contains 1 plasmid, resistant to copper and streptomycin, carries Tn5393 on the plasmid - *ornamental pear (Sundin).
 13517 a* *Pyrus calleryana* Decne. - ornamental pear cv. Aristocrat - stem tip dieback and canker. USA Jul 1991. From G.W. Sundin 8B48 - Plasmid 35: 98-107 - contains 1 plasmid, resistant to copper - *ornamental pear (Sundin).
 13518 a* *Pyrus calleryana* Decne. - ornamental pear cv. Aristocrat - stem tip dieback and canker. USA Aug 1990. From G.W. Sundin FF5 - Appl. Environ. Microbiol. 59: 1010-1024, 1993 - contains no indigenous plasmids - *ornamental pear (Sundin).

Pseudomonas syringae pv. *tomato* (Okabe 1933) Young *et al.* 1978

- 13128 * *Lycopersicon esculentum* Mill. - tomato cv. Rutgers. Iran Jun 1994. From H. Rahimian T16-9 (Tom3) - *tomato (Rahimian).

Pseudomonas tolaasii Paine 1919

- 13123 * *Agaricus bisporus* (Lange) Imbach - cultivated mushroom - pilei and stipes. Iran Dec 1994. From H. Rahimian 9b-1 - *cultivated mushroom (Rahimian).
 13125 * *Lycoperdon* sp. - puff ball - rotting pileus. Iran 1994. From H. Rahimian LYC12 (12D5) - 2 colony forms - **Scleroderma* sp., *Agaricus bisporus* (Rahimian).
 13124 * *Scleroderma* sp. - rotten pileus and stipe. Iran 1994. From H. Rahimian LYC11 (9b3) - **Scleroderma* sp., *Agaricus bisporus* (Rahimian).

Pseudomonas viridiflava (Burkholder 1930) Dowson 1939

- 13302 *Actinidia chinensis* Planch. - kiwifruit cv. Earligold. Te Puke, BP, NZ Nov 1996. From K.R. Everett 6 - LOPAT II.
 13303 *Actinidia chinensis* Planch. - kiwifruit cv. Earligold - blossom. Te Puke, BP, NZ Nov 1996. From K.R. Everett 8 - LOPAT II.
 13104 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4294 ← J.L. Gaignard JE71-18.
 13105 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4295 ← J.L. Gaignard JE90-3.
 13106 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4296 ← J.L. Gaignard JE112-12B.
 13107 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4297 ← J.L. Gaignard JE125-12B.

- 13108 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4298 ← J.L. Gagnard JE125-25.
 13109 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4299 ← J.L. Gagnard JE129-10.
 13110 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4300 ← J.L. Gagnard JE129-20.
 13111 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4301 ← J.L. Gagnard JE135-14.
 13112 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit. France 1985. From CFBP 4302 ← J.L. Gagnard JE135-15.
 13419 * *Citrus aurantium* L. - sour orange - water soaked leaf spots and canker-like symptoms on shoots. Iran 1996. From H. Rahimian NM1 - Iranian J. Pl. Path. 33: (in press) - LOPAT ++++ (Rahimian) - *sour orange, sweet orange (Rahimian).
 13418 * *Spinacia oleracea* L. - spinach - leafspot and blight. Iran 1995. From H. Rahimian ES12 - LOPAT ++++ (Rahimian) - *spinach (Rahimian).

Rathayibacter iranicus (ex Sharif 1961) Zgurskaya *et al.* 1993

- 13126 *Triticum aestivum* L. - wheat - gumming spike. Iran Oct 1994. From H. Rahimian MAR22 ← V. Babee-Zad.
 13127 * *Triticum aestivum* L. - wheat - gumming spike. Iran 1994. From H. Rahimian MOB6 ← V. Babee-Zad - *wheat (Rahimian).

Rhizobium etli Segovia *et al.* 1993

- 13642 a From USDA 9032 - Type strain.

Rhizobium fredii Chen, Yan & Li 1988

- 13647 a *Glycine max* (L.) Merr. - soybean. China 1979. From USDA 205 ← S.N. May - serogroup 193 - Type strain.

Rhizobium galegae Lindstrom 1989

- 13643 a From USDA 4128 - Type strain.

Rhizobium hainanense Chen *et al.* 1997

- 13690 a From USDA 3588 - Type strain.

Rhizobium huautlense Wang *et al.* 1998

- 13551 a *Sesbania herbacea* (Mill.) R.McVaugh - root nodule. Mexico. From E.T. Wang S02 - see also 13691 - Int. J. Syst. 48: 687-699, 1998 - Type strain.
 13585 a *Sesbania herbacea* (Mill.) R.McVaugh - root nodule. Mexico Aug 1996. From E.T. Wang S11 - Int. J. Syst. Bacteriol. 48: 687-699, 1998.
 13586 a *Sesbania herbacea* (Mill.) R.McVaugh - root nodule. Mexico Aug 1996. From E.T. Wang S25 - Int. J. Syst. Bacteriol. 48: 687-699, 1998..
 13587 a *Sesbania herbacea* (Mill.) R.McVaugh - root nodule. Mexico Aug 1996. From E.T. Wang S35 - Int. J. Syst. Bacteriol. 48: 687-699, 1998..
 13588 a *Sesbania herbacea* (Mill.) R.McVaugh - root nodule. Mexico Aug 1996. From E.T. Wang S103 - Int. J. Syst. Bacteriol. 48: 687-699, 1998..
 13589 a *Sesbania herbacea* (Mill.) R.McVaugh. Mexico Aug 1996. From E.T. Wang S124 - Int. J. Syst. Bacteriol. 48: 687-699, 1998..

An error in the preparation of the Catalogue (1997) resulted in a mis-allocation of the strains of *R. leguminosarum* below to be included in *R. leguminosarum* biovar *leguminosarum*.

Rhizobium leguminosarum (Frank 1879) Frank 1889

- 6680 *Lathyrus* sp. - nodule. From R.M. Greenwood NZP5423.

Rhizobium leguminosarum (Frank 1879) Frank 1889 biovar *phaseoli* [of D.C. Jordan in Bergey's Manual (1984)]

- syn: *Rhizobium phaseoli* Dangeard 1926
 2781 *Phaseolus coccineus* L. - runner bean - nodule. Tauranga, BP, NZ. From A. Hastings.
 2672 *Phaseolus vulgaris* L. - bean - nodule. Mt Albert, AK, NZ Sep 1969. From A. Hastings.
 6745 b *Phaseolus vulgaris* L. - bean - nodule. UK 1972. From R.C. Close ← RCR 3622 - Nod +ve; fix +ve (*P. vulgaris*).
 5818 From J.D. Taylor 960 ← RCR 3605.
 5820 From J.D. Taylor 962 ← RCR 3644.

Rhizobium leguminosarum (Frank 1879) Frank 1889 biovar *viciae* [of D.C. Jordan - in Bergey's Manual (1984)]

- syn: *Rhizobium leguminosarum* (Frank 1879) Frank 1889
 1298 *Pisum sativum* L. - pea - nodule. Australia. From A. Hastings ← J.M. Vincent SU364.
 1299 b *Pisum sativum* L. - pea - nodule. USA. From A. Hastings ← J.M. Vincent SU391 - Nod +ve; fix +ve (*Pisum sativum*, *Vicia sativa*).
 1665 *Pisum sativum* L. - pea - nodule. NZ 1965. From A. Hastings AH35.
 2671 *Pisum sativum* L. - pea - nodule. Epsom, AK, NZ Sep 1968. From A. Hastings.
 3665 *Pisum sativum* L. - pea - nodule. Wanganui, WI, NZ Feb 1974. From A. Hastings.
 3666 *Pisum sativum* L. - pea - nodule. Wanganui, WI, NZ Feb 1974. From A. Hastings.
 13689 a *Pisum sativum* L. - pea. USA 1933. From USDA 2370 ← L.W. Erdman 3HOq18 = ATCC 10004: NCIB 11478 - Type strain.
 3661 b *Pisum sativum* L. var. *arvense* (L.) Poir. - field pea - nodule. Australia 1958. From A. Hastings ← R.J. Roughley TA101 - Nod +ve; fix +ve (*Vicia* sp., *Pisum* sp.).
 5943 a *Vicia sativa* L. subsp. *nigra* (L.) Ehrh. - narrow-leaved vetch - nodule. Manawatu, WI, NZ 1964. From R.M. Greenwood NZP5225 - Nod +ve; fix +ve.

Rhizobium mongolense van Berkum *et al.* 1998

- 13688 a *Medicago ruthenica* Trautv. From USDA 1844 - Type strain.

Rhizobium sp.

- 13212 *Aeschynomene falcata* (Poir.) DC. - joint vetch cv. Bargoo. From NZP 5546.
 13191 *Astragalus cicer* L. From NZP 5254 ← CB 1198.
 13197 *Carmichaelia cunninghamii* Raoul. Wanganui, WI, NZ. From NZP 5218.

- 13194 *Carmichaelia flagelliformis* Col. ex Hook.f. Australia. From NZP 5371 - soil ex *Swainsona galegifolia*.
- 13154 *Carmichaelia robusta* Kirk. Canterbury, NZ. From NZP 5175.
- 13196 *Carmichaelia robusta* Kirk. Canterbury, NZ. From NZP 5173.
- 13190 *Carmichaelia violacea* Kirk. Canterbury, NZ. From NZP 5213.
- 13189 *Clianthus puniceus* (G. Don) Sol. ex Lindl. - kaka beak. Hinemaia, TO, NZ. From NZP 5183.
- 13195 *Glycine max* (L.) Merr. - soybean. USA. From NZP 5531.
- 13150 *Lens culinaris* Medicus - lentil. From NZP 5400.
- 13148 *Leucaena leucocephala* (Lam.) de Wit. Australia. From NZP 5358 ← CB 81.
- 13152 *Leucaena leucocephala* (Lam.) de Wit. New Guinea. From NZP 5513 ← SU 658.
- 13142 *Lotus corniculatus* L. - birdsfoot trefoil. Canada. From NZP 2227.
- 13145 *Neptunia gracilis* Benth. - native sensitive plant. Australia. From NZP 5269 ← CB 2001.
- 13146 *Ornithopus perpusillus* L. Taupo, TO, NZ. From NZP 5276.
- 13192 *Parochetus communis* Buch.-Ham.ex D.Don - shamrock pea, blue oxalis - nodules contain black pigments. Franz Josef, WD, NZ. From NZP 5300.
- 13153 *Phaseolus vulgaris* L. - bean. From NZP 5518 ← CIAT 161.
- 13143 *Pisum sativum* L. - pea. England. From NZP 5262 ← CB 596.
- 13211 *Pisum sativum* L. var. *arvense* (L.) Poir. - field pea. Canada. From NZP 5484.
- 13147 *Robinia pseudoacacia* L. - black locust, false acacia. Taupo, TO, NZ. From NZP 5356.
- 13193 *Robinia pseudoacacia* L. - black locust, false acacia. Palmerston North, WI, NZ. From NZP 5302.
- 3292 ? *Trifolium hybridum* L. - Alsike clover - nodule. Tara Hills, SC, NZ. From A. Hastings ← A. Nordmeyer F111 - rec. as *R. leguminosarum* biovar. *trifolii* - probably not *Rhizobium* sp.
- 13144 *Sesbania aculeata* Poir. Australia. From NZP 5264 ← CB 295.
- 13151 *Vicia faba* L. - broad bean. From NZP 5485.
- 13149 From NZP 5384.
- Rhizobium tianshanense* Chen *et al.* 1995
- 13645 a From USDA 3592 - Type strain.
- Rhizobium tropici* Martinez-Romero *et al.* 1991
- 13646 a From USDA 9030 - Type strain.
- Rhodococcus fascians* Tilford 1936) Goodfellow 1984
- 13420 a* *Petunia X hybrid* Hort. Vilm.-Andr. - petunia cv. Ferize - leafy gall and fasciation of stem and crown. Iran 1994. From H. Rahimian AT5 - Iran J. Pl. Path. 32: 125, 1996 - *petunia, garden beef, geranium, chrysanthemum (Rahimian).
- Rhodococcus* sp.
- 13753 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 4-36 - degrades alkanes.
- 13754 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 4-38 - degrades alkanes.
- 13755 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 5-1 - degrades alkanes - 16S rDNA sequence analysis.
- 13756 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 5-4 - degrades alkanes.
- 13757 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 5-11 - degrades alkanes.
- 13758 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 5-14 - degrades alkanes - 16S rDNA sequence analysis.
- 13759 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 6-1 - degrades alkanes.
- 13760 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 6-6 - degrades alkanes.
- 13761 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 7-1 - degrades alkanes - 16S rDNA sequence analysis.
- 13762 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 7-5 - degrades alkanes.
- 13763 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 7-25 - degrades alkanes.
- 13764 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 8-5 - degrades alkanes.
- 13765 Soil contaminated with oil JP8 jet fuel. Antarctica Feb 1997. From J. Aislabie 8-11 - degrades alkanes - 16S rDNA sequence analysis.
- Sinorhizobium saheli* De Lajudie *et al.* 1994
- 13648 a From USDA 4893 - Type strain.
- Sinorhizobium teranga* De Lajudie *et al.* 1994
- 13649 a From USDA 4894 - Type strain.
- Sphingomonas paucimobilis* (Holmes *et al.* 1977) Yabuuchi *et al.* 1990
- 13533 a? Soil. Waipa Mill, BP, NZ Oct 1994. From G. Lloyd-Jones WP01 - Appl. Environ. Microbiol. 63: 3286-3290, 1997 - degrades phenanthrene, biphenyl, meta-xylene.
- 13534 a? Lagoon water. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP003 - Appl. Environ. Microbiol. 63: 3286-3290, 1997.
- 13535 a? Stream. Rotowaro, WO, NZ Mar 1995. From G. Lloyd-Jones RP006 - Appl. Environ. Microbiol. 63: 3286-3290, 1997 - degrades phenanthrene.
- 13598 Antarctica Feb 1995. From J. Aislabie Ant17 - degrades naphthalene.
- Sphingomonas* sp.
- 13599 Antarctica Feb 1995. From J. Aislabie Ant20 - degrades naphthalene, phenanthrene.
- 13602 Antarctica Jan 1996. From J. Aislabie 8/44 - degrades salicylate.
- Streptomyces europaeiscabies* Gardan *et al.* (in press) (or *scabiei-europaei*)
- 13714 a *Solanum tuberosum* L. - potato - common scab lesion on tuber. France. From CFBP 4497 ← K. Bouček-Mechiche - Res. Microbiol. 149: 653-663, 1998 - Type strain.
- Streptomyces reticuliscabies* Gardan *et al.* (in press) or (*reticulatiscabiei*)
- 13715 a *Solanum tuberosum* L. - potato - common scab on tuber. France. From CFBP 4521 ← K. Bouček-Mechiche - Res. Microbiol. 149: 653-663, 1998

- Type strain.

Streptomyces stellaescabies Gardan *et al.* (in press) (or *stellatiscabies*)

- 13716 a *Solanum tuberosum* L. - potato - netted scab on tuber. France. From CFBP 4531 ← K. Bouček-Mechiche - Res. Microbiol. 149: 653-663, 1998 - Type strain.

Unidentified bacterium

- 13121 DDT contaminated soils. South Island, NZ Mar 1996. From J. Aislabie DDE1 - Cleaves DDE and also degrades biphenyl.
 13120 Heathcote River, MC, NZ 1991. From J. Aislabie MacL - Metabolises diloenzothiophene - possibly *Comamonadaceae*
 13536 Phenanthrene. Waipa Mill, BP, NZ Apr 1994. From G. Lloyd-Jones WP03 - degrades phenanthrene - gram -ve.
 13601 Antarctica Jan 1995. From J. Aislabie 7/22 - degrades m-toluate.
 13603 Antarctica. From J. Aislabie 8/48 - degrades salicylate, naphthalene, phenanthrene.
 13604 Jet fuel (JP8). Antarctica. From J. Aislabie 8/51 - degrades m-toluene.

Xanthomonas campestris (Pammel 1895) Dowson 1939

- 13056 * *Cordia goeldiana* Huber. Brazil 1984. From IBSBF 510 ← J.R. Neto - rec. as *X. campestris* pv. *cordiae* - **Cordia goeldiana* (Neto).
 13090 * *Cordia goeldiana* Huber. Brazil 1984. From IBSBF 511 ← J.R. Neto - rec. as *X. campestris* pv. *cordiae* - **Cordia goeldiana* (Neto).

Xanthomonas campestris pv. *arracaciae* (Pereira *et al.* 1971) Dye 1978

- 13209 *Arracacia xanthorrhiza* E.N.Bancr. Brazil 1995. From IBSBF 1198 ← V.A. Malavolta Jr.
 13210 *Arracacia xanthorrhiza* E.N.Bancr. Brazil 1995. From IBSBF 1199 ← V.A. Malavolta Jr.

Xanthomonas campestris pv. *citri* (Group A) (Hasse 1915) Dye 1978

- 13421 a* *Citrus aurantiifolia* (Christm.) Swingle - Mexican lime, key lime - canker and spots of fruit, leaves and shoots. Iran 1995. From H. Rahimian BAZ1 - Iran. J. Pl. Pathol. 32: 189-190, 1996 - *lime, lemon, sweet and sour orange, tangerine (Rahimian).

Xanthomonas campestris pv. *incanae* Kendrick & Baker 1942) Dye 1978

- 13305 *Matthiola incana* (L.) R.Br. - stock. May 1997. From C.F. Hill LYN15228.

Xanthomonas campestris pv. *mori* Maji, Qadri & Pal 1999

- 13199 * *Morus alba* L. - mulberry cv. S1 - leafspot and blight. India Jul 1995. From M.D. Maji - **Morus* sp. (Maji) - Pathotype strain.

Xanthomonas campestris pv. *parthenii* Chand *et al.* 1995

- 13537 India. From R. Chand RCXCP5 - sensitive to streptomycin (15ug/ml), atypical, virulent.
 13542 India. From R. Chand RCXCP6 - resistant to ampicillin, atypical.
 13543 India. From R. Chand RCXCP7 - resistant to ampicillin - atypical, virulent.
 13544 India. From R. Chand RCXCP8 - atypical, highly virulent.

Xanthomonas campestris pv. *pruni* (Smith 1903) Dye 1978

- 13708 *Prunus armeniaca* L. - apricot - leaves. Alexandra, CO, NZ 1995. From P.D. Scotti 95-138-2 - identified with ATCC pruniphage.
 13710 *Prunus armeniaca* L. - apricot cv. Sunglo - leaves. Alexandra, CO, NZ 1996. From P.D. Scotti 96-04-1 - identified with ATCC pruniphage.
 13711 *Prunus armeniaca* L. - apricot cv. San Castrese - leaves. Clyde, CO, NZ 1996. From P.D. Scotti 96-13-1 - identified with ATCC pruniphage.
 13712 *Prunus armeniaca* L. - apricot - leaves. Alexandra, CO, NZ 1996. From P.D. Scotti 96-16-1 - identified with ATCC pruniphage.
 13713 *Prunus armeniaca* L. - apricot cv. Red Diamond - leaves. Clyde, CO, NZ 1996. From P.D. Scotti 96-21-1 - identified with ATCC pruniphage.
 13709 *Prunus persica* (L.) Batsch. var. *nucipersica* (Suckow.) C.K.Schneid - nectarine - leaves. Alexandra, CO, NZ 1995. From P.D. Scotti 95-152-2 - identified with ATCC pruniphage.
 13707 *Prunus* sp. - plum cv. Dunstan. CO, NZ 1995. From P.D. Scotti 95-116-1 - identified with ATCC pruniphage.
 13750 From P.D. Scotti ← ATCC pruniphage host.

Xanthomonas campestris pv. *viegasii* Robbs *et al.* 1989

- 13091 *Pachystachys lutea* Nees. Brazil 1986. From IBSBF 576 ← J.R. Neto.
 13092 *Pachystachys lutea* Nees. Brazil 1986. From IBSBF 601 ← J.R. Neto.
 13093 *Pachystachys lutea* Nees. Brazil 1986. From IBSBF 602 ← J.R. Neto.

Xanthomonas campestris pv. *viticola* (Nayudu 1972) Dye 1978

- 13702 *Vitis vinifera* L. - grape cv. Red Globe - berry. Brazil 1998. From IBSBF 1369 ← J.R. Neto.
 13703 *Vitis vinifera* L. - grape cv. Red Globe - leaf. Brazil 1998. From IBSBF 1370 ← J.R. Neto.
 13704 *Vitis vinifera* L. - grape cv. Red Globe - berry. Brazil 1998. From IBSBF 1376 ← V.A. Malavolta Jr.
 13705 *Vitis vinifera* L. - grape cv. Red Globe - leaf. Brazil 1998. From IBSBF 1377 ← V.A. Malavolta Jr.
 13706 *Vitis vinifera* L. - grape cv Ribie - leaf. Brazil 1998. From IBSBF 1386 ← V.A. Malavolta Jr.

Xanthomonas campestris pv. *zinniae* (Hopkins & Dowson 1949) Dye 1978

- 13525 *Zinnia elegans* Jacq. - youth-and-old-age. Mt Eden, AK, NZ Jan 1998. From C.F. Hill LYN AN1617.

Xanthomonas sp.

- 13422 a* *Alnus subcordata* (Loisel.) Duby - black alder - angular leafspots. Iran 1996. From H. Rahimian AL757 - Iran. J. Pl. Pathol. 25: 27-8, 1989 - **Alnus subcordata* (Rahimian).
 13304 * *Castanea sativa* Miller - sweet chestnut - leaf. Waitoki, AK, NZ Jan 1997. From C.F. Hill LYN15147.
 13315 * *Catharanthus pusillus* G.Don - stem, leaf, flower, pod and seed. India Sep 1996. From R. Chand 1 - rec. as *X. campestris* pv. *catharanthi* - 1 - *C.

- pusillus*, *C. roseus*, *C. alba* (Chand).
- 13316 * *Catharanthus pusillus* G.Don - stem, leaf, flower, pod and seed. India Sep 1996. From R. Chand 2 - rec. as *X. campestris* pv. *catharanthi* - **C. pusillus*, *C. roseus*, *C. alba* (Chand).
- 13317 * *Catharanthus pusillus* G.Don - stem, leaf, flower, pod and seed. India Sep 1996. From R. Chand 3 - rec. as *X. campestris* pv. *catharanthi* - **C. pusillus*, *C. roseus*, *C. alba* (Chand).
- 13423 * *Catharanthus roseus* (L.) G.Don - periwinkle - canker and blight of stem. Iran 1995. From H. Rahimian PV5 - *periwinkle (Rahimian).
- 13424 * *Catharanthus roseus* (L.) G.Don - periwinkle - canker and blight of stem. Iran 1996. From H. Rahimian PV11 - *periwinkle (Rahimian).
- 13401 * *Olea europaea* L. - olive cv. Barnea - cankerous branch. Hikurangi, ND, NZ Apr 1997. From R.K. Taylor 36A - *olive (Taylor).
- 13402 * *Olea europaea* L. - olive cv. Barnea - cankerous branch. Hikurangi, ND, NZ Jun 1997. From R.K. Taylor 36B - *olive (Taylor).
- 13403 * *Olea europaea* L. - olive cv. Barnea - cankerous branch. Hikurangi, ND, NZ Jun 1997. From R.K. Taylor 36C - *olive (Taylor).

Fungi

Alternaria alternata (Fries) Keissler

syn. *Alternaria tenuis* C.G. Nees

13557 *Malus* sp. - apple cv. Cox - shoot. UK Aug 1997. From S. Langrell ENDO25 ← M. Lolas.

Alternaria anagallidis Raabe

13571 *Anagallis arvensis* L. - scarlet pimpernel - leaf. Mt Albert, AK, NZ Apr 1998. From C.F. Hill AN1843.

Alternaria argyranthemii Simmons & C.F. Hill

13570 *Argyranthemum frutescens* - marguerite daisy - leaves. Mt Albert, AK, NZ Apr 1998. From C.F. Hill AN1842 = BPI 7494144.

13744 *Chrysanthemum segetum* L. - corn marigold - old leaves. Royal Oak, AK, NZ Nov 1998. From C.F. Hill NZPPRL9-98-57.

Alternaria calendulae Ondrej

13665 *Calendula officinalis* L. - calendula - leaves. Kumeu, AK, NZ Oct 1998. From C.F. Hill LYN17016.

Alternaria sonchi J.J. Davis

13745 *Sonchus oleraceus* L. - sow thistle - leaves. Kumeu, AK, NZ Nov 1998. From C.F. Hill NZPPRL9-98-50.

Alternaria zinniae M.B. Ellis

13661 *Zinnia elegans* Jacq. - zinnia - damping-off of seedling. Mt Albert, AK, NZ Sep 1998. From C.F. Hill LYN16962.

Aphanomyces euteiches Drechsler

13378 *Phaseolus vulgaris* L. - snap bean. France May 1996. From E. Wicker Ae35.

13377 *Pisum sativum* L. - pea cv. Solara - root rot and watersoaking of stem. France May 1995. From E. Wicker Ae5.

13379 * *Vicia faba* L. - faba bean - blackening soft rot on rootlet tips. France Apr 1997. From E. Wicker Ae88 - *pea (Wicker).

Aureobasidium pullulans (de Bary) Arnaud

syn. *Pullularia pullulans* (de Bary) Berkhout

13346 *Malus X domestica* Borkh. - apple cv. Cox - shoot (3 years old). UK Jun 1997. From S. Langrell ENDO23.

13060 From E. Ebbertt ← IMI 145194 ← P.B. Marsh = ATCC 9348 - deteriorates plastics - used in fungus resistance testing.

Aureobasidium zeae (Narita & Hiratsuka) Dingley ex Hermanides-Nijhof

syn. *Kabatiella zeae* Narita & Hiratsuka

13071 *Zea mays* L. - maize cv. P3531 - leafspot (eyespot). Te Awamutu, WO, NZ Feb 1996. From P.G. Broadhurst T4.

13073 *Zea mays* L. - maize cv. P3514 - leafspot (eyespot). Te Awamutu, WO, NZ Feb 1996. From P.G. Broadhurst T3.

Botryosphaeria dothidea (Mougeot ex Fries) Cesati & de Notaris

syn. *Fusicoccum aesculi* Corda

13576 *Malus X domestica* Borkh. - apple cv. Pacific Rose - fruit core rot. Havelock North, HB, NZ May 1998. From M.A. Manning.

Botryosphaeria obtusa (Schweinitz) Shoemaker

anam. *Sphaeropsis malorum* Peck

13577 *Malus X domestica* Borkh. - apple cv. Pacific Rose - fruit core rot. Havelock North, HB, NZ May 1998. From M.A. Manning.

Botrytis cinerea Persoon

13560 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-1 ← G. Tate.

13561 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-2 ← G. Tate.

13562 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-3 ← G. Tate.

13563 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-4 ← G. Tate.

13564 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-5 ← G. Tate.

13565 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-6 ← G. Tate.

13566 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-7 ← G. Tate.

13567 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-8 ← G. Tate.

13568 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-9 ← G. Tate.

13569 *Prunus persica* (L.) Batsch - peach cv. Golden Queen - fruit. HB, NZ Oct 1993. From R.E. Beever 786-10 ← G. Tate.

13063 * Palmerston North, WI, NZ 1993. From P. Weeds Ms024 - Mycol. Res. 1998 (in press) - Isolated from single ascospore - representative strain of selenate resistant (SelR) class C, MbclHR, DafIS - *French bean (Weeds).

13064 * Mt Albert, AK, NZ 1995. From P. Weeds P2-001 - Mycol. Res. 1998 (in press) - Isolated from single ascospore - representative strain of selenate resistant (SelR) Class A, MbclHR, DafILR - *French bean (Weeds).

13065 * Mt Albert, AK, NZ 1995. From P. Weeds P2-006 - Mycol. Res. 1998 (in press) - Isolated from single ascospore - representative strain of selenate resistant (SelR) class A, MbclHR, DafIS - *French bean (Weeds).

13066 * Mt Albert, AK, NZ 1995. From P. Weeds P5-006 - Mycol. Res. 1998 (in press) - Isolated from single ascospore - representative strain of selenate resistance class B, SelR, MbclS DafIS - *French bean (Weeds).

13067 * Mt Albert, AK, NZ 1995. From P. Weeds P6-007 - Mycol. Res. 1998 (in press) - Isolated from single ascospore - representative strain nit1, MbclS, DafIS - *French bean (Weeds).

13068 * Mt Albert, AK, NZ 1995. From P. Weeds P6-016 - Mycol. Res. 1998 (in press) - Representative strain nit1, MbclHR, DafIS - *French bean (Weeds).

- 13069 * Mt Albert, AK, NZ 1995. From P. Weeds P6-005 - Mycol. Res. 1998 (in press) - representative strain nitrate non-utilising, nit1 MbclHR, Daf1LR - single ascospore - **Phaseolus vulgaris*.
- 13165 * Mt Albert, AK, NZ 1995. From P. Weeds P2-005 - Mycol. Res. 1998 (in press) - representative strain, selanate resistance type A, MbclHR, DafIS, SelR - single ascospore - **Phaseolus vulgaris*.
- 13166 * Mt Albert, AK, NZ 1995. From P. Weeds P2-011 - Mycol. Res. 1998 (in press) - representative strain, selanate resistance type A, MbclHR, DafILR, SelR - single ascospore - **Phaseolus vulgaris*.
- 13167 * Mt Albert, AK, NZ 1995. From P. Weeds P5-029 - representative strain, selanate resistance type B, MbclHR, DafS, SellR - single ascospore - **Phaseolus vulgaris*.
- 13168 * Mt Albert, AK, NZ 1995. From P. Weeds P6-067 - representative strain, nitrate non-utilising, mutant nit1, MbclS, DafIS - single ascospore - **Phaseolus vulgaris*.
- 13169 * Mt Albert, AK, NZ 1995. From P. Weeds P16-025 - single ascospore - strain containing both SelR and nit1, MbclS, DafIS - **Phaseolus vulgaris*.
- 13170 * Mt Albert, AK, NZ 1995. From P. Weeds P16-067 - single ascospore - strain containing both SelR and nit1, MbclHR, DafILR - **Phaseolus vulgaris*.
- 13369 NZ. From P. Weeds Ms44 - Mycol. Res. 102: 791-800, 1998 - sodium selenate resistant mutant, class A, MbclS, DafIS, Mat1-1/2.
- 13370 NZ. From P. Weeds Mp97 - Phys. Mol. Pl. Path. (in press) 1998 - non-aggressive ultra-violet mutant from strain A4, MbclHR, Daf1S, Pat1, Mat1-2.
- 13371 From P. Weeds P21-002 - Phys. Mol. Pl. Path. (in press), 1998 - single ascospore progeny from cross ICMP13370 (MP97) X SAS56 (Italian reference strain), MbclHR-DafIS-Pat1, Mat1-1,.
- 13372 From P. Weeds P21-012 - Phys. Mol. Pl. Path. (in press), 1998 - single ascospore progeny from cross ICMP 13370 (MP97) X SAS56 (Italian reference strain), MbclS, DafI-S, Pat1.
- 13373 From P. Weeds P33-146 - Phys. Mol. Pl. Path. (in press) 1998 - single ascospore progeny from cross ICMP 13170 X P21-040, Mbc1HR, DafILR, Pat1.
- 13374 From P. Weeds P33-141 - Phys. Mol. Pl. Path. (in press) 1988 - single ascospore progeny from cross of P21-040 X ICMP 13170, Mbc1HR, DafILR, nit1, SellR, Pat1.
- 13375 From P. Weeds P33-034 - Phys. Mol. Pl. Path. (in press) 1998 - single ascospore progeny from cross of ICMP 13170 X P21-040, Mbc1HR, DafIS, nit1, sellR, Pat1.
- 13376 From P. Weeds P33-124 - Phys. Mol. Pl. Path. (in press) 1998 - single ascospore progeny from cross of ICMP 13170 X P21-040, Mbc1S, DafIS, nit1, SellR, Pat1.
- 13670 From P. Weeds A1 - Mycol. Res. 7: 791 - 800, 1998 - Single ascospore progeny of ICMP 9430 X ICMP 9433.
- 13671 From P. Weeds A4 - Mycol. Res. 791 - 800, 1998 - single ascospore progeny of ICMP 7577 X ICMP 7596.
- 13672 From P. Weeds A5 - Mycol. Res. 791 - 800, 1998 - Single ascospore progeny of ICMP 7577 X ICMP 7596.
- 13673 NZ. From P. Weeds Mn001 - Mycol. Res. 791-799, 1998 - nit1 mutant of ICMP 13672 (A5).
- 13674 From P. Weeds Mn012 - Mycol. Res. 791 - 800, 1998 - Nit 1 mutant of ICMP 8569.
- Botrytis* sp.
- 13347 *Malus X domestica* Borkh. - apple cv. Discovery - shoot (first year). UK Jun 1997. From S. Langrell ENDO21 ← M. Lolas.
- Ceratocystis fimbriata* Ellis & Halsted
- anam. *Chalara* sp.
- 13575 *Ipomoea batatas* (L.) Lam. - kumara - storage root rot. Northland, NZ May 1998. From P.G. Broadhurst 98005.
- Ceratocystis paradoxa* (Dade) C. Moreau
- syn. *Chalara paradoxa* (de Seynes) Saccardo
- 13062 *Triticum aestivum* L. - wheat - leafspots. Oamaru, DN, NZ Nov 1996. From S. Dodd-Wilson DN141 = IMI 370377.
- Cercospora canescens* Ellis & Martin
- 13657 *Gossypium* sp. India 1997. From R. Chand RMLCG15.
- 13654 *Phaseolus vulgaris* L. - bean. India 1995. From R. Chand RMLCC6.
- 13655 *Vigna mungo* (L.) Hepper - black gram. India 1996. From R. Chand RMLCC8.
- 13656 *Vigna mungo* (L.) Hepper - black gram. India 1997. From R. Chand RMLCC10.
- 13658 *Vigna radiata* (L.) R. Wilcz. - mung bean. India 1997. From R. Chand RMLCC5.
- Cercospora* sp.
- 13187 *Tristania conferta* R.Br - Brisbane box - leafspot. Mangere, AK, NZ Jan 1997. From H.M. Dance AN14449.
- Ciborinia camelliae* Kohn.
- 13659 *Camellia japonica* L. - camellia - flower. New Plymouth, TK, NZ Aug 1998. From C.F. Hill LYN16843.
- Cladosporium ?herbarum* (Persoon) Link
- 13348 *Malus X domestica* Borkh. - apple cv. Worcester - shoot (2-3 years old). UK May 1997. From S. Langrell ENDO9.
- Cladosporium* sp.
- 13349 *Malus X domestica* Borkh. - apple cv. Cox - shoot (2-3 years old). UK May 1997. From S. Langrell ENDO11.
- 13350 *Malus X domestica* Borkh. - apple cv. Cox - shoot (3 years old). UK May 1997. From S. Langrell ENDO10.
- 13351 *Malus X domestica* Borkh. - apple cv. Cox - shoot (3-4 years old). UK May 1997. From S. Langrell ENDO12.
- Coccomyces binnaburrensis* P.R. Johnston
- 13731 Unidentified leaves. Australia Jun 1996. From P.R. Johnston AU96-247 = PDD 68291.
- 13734 Unidentified fallen leaves. Australia Jun 1996. From P.R. Johnston AU96-257 = PDD 68322 - ex Type specimen.
- Coccomyces crystalligerus* Sherwood
- 13719 *Dicksonia antarctica* Labill. - Tasmanian tree fern - dead frond. Australia May 1996. From P.R. Johnston AU96-108 = PDD 68282.
- Coccomyces globosus* P.R. Johnston
- 13717 *Eucalyptus* sp. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-91 = PDD 69138.

- 13718 *Eucalyptus* sp. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-104 = PDD 68259.
 13720 *Eucalyptus* sp. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-109 = PDD 69139.
 13727 *Eucalyptus* sp. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-211 = PDD 68286.
 13735 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-5 = PDD 68252.
 13736 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-18.
 13737 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-65.
 13739 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-83 = PDD 68254.
 13740 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-89 = PDD 68256.
 13741 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-126.
 13742 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-132.
 13743 *Eucalyptus* sp. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-145 = PDD 68253.
 13733 *Lophostemon confertus* (R.Br.) P.G.Wilson - fallen leaves. Australia Jun 1996. From P.R. Johnston AU96-250 = PDD 68292.
 13732 Unidentified leaves. Australia Jun 1996. From P.R. Johnston AU96-248.
- Coccomyces lauraceus* P.R. Johnston
 13728 *Lauraceae* - fallen leaves. Australia Jun 1996. From P.R. Johnston AU96-225 = PDD 68288.
- Coccomyces limitatus* (Berkeley & M.A. Curtis) Saccardo
 13726 Unidentified fallen leaves. Australia May 1996. From P.R. Johnston AU96-206 = PDD 68285.
- Coccomyces phyllocladi* P.R. Johnston
 13738 *Phyllocladus aspleniifolius* (Labillardiere) Hook.f. - fallen leaf. Australia Oct 1997. From P.R. Johnston AU97-68.
- Coccomyces radiatus* Sherwood
 13721 *Nothofagus moorei* Maiden. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-149 = PDD 68261.
 13724 *Nothofagus moorei* Maiden. - fallen leaves. Australia May 1996. From P.R. Johnston AU96-186 = PDD 68283.
 13730 *Nothofagus moorei* Maiden. - fallen leaves. Australia Jun 1996. From P.R. Johnston AU96-233 = PDD 68289.
 13722 Unidentified fallen leaves. Australia May 1996. From P.R. Johnston AU96-159.
- Coccomyces tympanibaculi* P.R. Johnston
 13725 *Schizomeria ovata* D.Don - fallen leaves. Australia May 1996. From P.R. Johnston AU96-205 = PDD 68266.
 13723 Unidentified fallen leaves. Australia May 1996. From P.R. Johnston AU96-180 = PDD 68265 - ex Type specimen.
- Coccomyces walkeri* P.R. Johnston
 13729 *Sloanea australis* F.Muell. - fallen leaves. Australia Jun 1996. From P.R. Johnston AU96-227 - ex Type specimen.
- Cochliobolus sativus* (Ito & Kuribayashi) Dreschler ex Dastur.
 13651 *Triticale* sp. India. From R. Chand RCHST4.
 13583 *Triticum aestivum* L. - wheat. India. From R. Chand RCHSW2.
 13584 *Triticum aestivum* L. - wheat. India. From R. Chand RCHSW3.
- Colletotrichum acutatum* Simmonds
 13380 * *Persea americana* Mill. - avocado cv. Hass - post harvest rot of fruit. BOP, NZ. From K. Everett 16 ← W.F.T. Hartill - re-isolate of single spore - *avocado fruit (Everett).
- Dactylaria acerosa* Matsushima
 13178 *Zingiber mioga* Rosc. - myoga ginger - ex root surface. WO, NZ Oct 1996. From E.H.C. McKenzie ← P.G. Broadhurst.
- Diaporthe actinidiae* Sommer & Beraha.
 13683 a *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit - fruit. USA 1971. From C.F. Hill ← J. Hurrell = ATCC 28096 - Mycologia 67: 650, 1975 - ex Type strain.
- Didymella bryoniae* (Auerswald) Rehm
 anam. *Phoma cucurbitacearum* (Fries) Saccardo
 anam. *Ascochyta cucumis* Fautrey & Roumeguere
 13332 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1995. From P.G. Broadhurst 94092.
 13333 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95058.
 13334 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Aug 1996. From P.G. Broadhurst 96016.
 13335 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ May 1997. From P.G. Broadhurst 97013.
- Epicoccum* sp.
 13352 *Malus* sp. - applewood, root stock M9 - trunk above soil level. UK Mar 1996. From S. Langrell ENDO4 ← M. Lolos.
- Fusarium crookwellense* Burgess, Nelson & Toussoun
 13285 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1994. From P.G. Broadhurst 94089.
 13072 *Zea mays* L. - maize cv. P3861 - stem rot. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst H8-1.

Fusarium culmorum (W.G. Smith) Saccardo

- 13286 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95070.
13074 *Zea mays* L. - maize cv. P3861 - stem rot. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst H8-3.

Fusarium oxysporum Schlechtendal

- 13179 *Abelmoschus manihot* (L.) Medic - island cabbage - stem. Vanuatu Oct 1996. From E.H.C. McKenzie.
13171 *Cucurbita maxima* Duch. - squash - fruit. Vanuatu Nov 1996. From E.H.C. McKenzie E8.
13322 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ May 1994. From P.G. Broadhurst 94117.
13323 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jun 1997. From P.G. Broadhurst 97023.
13076 *Zea mays* L. - maize cv. DK471 - root rot. Te Awamutu, WO, NZ Apr 1996. From P.G. Broadhurst a.
13077 *Zea mays* L. - maize cv. P3753 - basal stem lesion. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst H1-1.
13078 *Zea mays* L. - maize cv. P3753 - root rot. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst H1-2.
13079 *Zea mays* L. - maize cv. P3730 - root rot of lodging plant. Pukekohe, AK, NZ Mar 1996. From P.G. Broadhurst Piii.

Fusarium oxysporum Schlechtendal f. sp. *dianthi* (Prillieux & Delacroix) Snyder & Hansen

- 13080 *Dianthus caryophyllus* L. - carnation - vascular wilt. Pukekohe, AK, NZ Jul 1996. From P.G. Broadhurst F573.

Fusarium pallidoroseum (M.C. Cooke) Saccardo

- 13173 *Carica papaya* L. - papaya - fruit rot. Vanuatu Oct 1996. From E.H.C. McKenzie E17.
13172 *Cucurbita maxima* Duch. - squash - fruit. Vanuatu Nov 1996. From E.H.C. McKenzie E10.
13174 *Zea mays* L. - maize - stem. Vanuatu Oct 1996. From E.H.C. McKenzie E20.

Fusarium semitectum Berkeley & Ravenel

syn. *Fusarium pallidoroseum* (Cooke) Saccardo

- 13324 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jun 1994. From P.G. Broadhurst 94136 - rec. as *F. pallidoroseum*.

Fusarium sp.

- 13183 *Allium cepa* L. - onion - bulb. Pukekohe, AK, NZ. From E.H.C. McKenzie.
13358 *Malus* sp. - applewood, root stock M9 - trunk below soil level. UK Apr 1996. From S. Langrell ENDO20 ← M. Lolas.
13353 *Malus X domestica* Borkh. - apple cv. Cox - shoot (4 years old). UK May 1997. From S. Langrell ENDO15.
13354 *Malus X domestica* Borkh. - apple cv. Sunset - shoot. UK May 1997. From S. Langrell ENDO16.
13355 *Malus X domestica* Borkh. - apple cv. Cox - shoot (2 years old). UK May 1997. From S. Langrell ENDO17.
13356 *Malus X domestica* Borkh. - apple cv. Cox - shoot (1 year old). UK May 1997. From S. Langrell ENDO18.
13357 *Malus X domestica* Borkh. - apple cv. Worcester - shoot (1 year old). UK May 1997. From S. Langrell ENDO19.

Fusarium subglutinans (Wollenweber & Reinking) Nelson, Toussoun & Makasas

- 13277 a *Cymbidium* sp. - orchid - pseudobulb. NZ Oct 1994. From P.G. Broadhurst 94201 - Pl. Dis. 80: 711, 1996.
13075 *Zea mays* L. - maize cv. P3861 - stem rot. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst H8-4.

Gibberella avenacea Cook

anam. *Fusarium avenaceum* (Corda) Saccardo

- 13284 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1994. From P.G. Broadhurst 94088.

Gibberella fujikuroi (Sawada) Wollenweber

anam. *Fusarium moniliforme* Sheldon

- 13175 *Zea mays* L. - maize - stem. Vanuatu Oct 1996. From E.H.C. McKenzie E19.

Gibberella intricans Wollenweber

anam. *Fusarium equiseti* (Corda) Saccardo

- 13287 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1995. From P.G. Broadhurst 94075.

Gibberella pulicaris (Fries) Saccardo

anam. *Fusarium sambucinum* Fuckel

- 13325 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1994. From P.G. Broadhurst 94084.
13326 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95036.
13327 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jun 1997. From P.G. Broadhurst 97018.
13328 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jun 1997. From P.G. Broadhurst 97019.

Gibberella zeae (Schweinitz) Petch

anam. *Fusarium graminearum* Schwabe

- 13321 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95050 - *F. graminearum* (group 2) ie produces perithecia of *G. zeae*.
13070 *Zea mays* L. - maize cv. P3861 - stem rot. Hamilton, NZ Feb 1996. From P.G. Broadhurst H8-2.
13081 *Zea mays* L. - maize cv. DK471 - root rot. Te Awamutu, WO, NZ Apr 1996. From P.G. Broadhurst b.
13082 *Zea mays* L. - maize cv. DK471 - stem rot. Te Awamutu, WO, NZ Apr 1996. From P.G. Broadhurst c.
13083 *Zea mays* L. - maize - basal stem rot. Pukekohe, AK, NZ Mar 1996. From P.G. Broadhurst Pii.
13176 *Zea mays* L. - maize - seed head. Vanuatu Oct 1996. From E.H.C. McKenzie E21.

Gliocladium sp.

- 13331 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Apr 1994. From P.G. Broadhurst 94091.

Glomerella cingulata (Stoneman) Spaulding & Schrenk

- anam. *Colletotrichum gloeosporioides* (Penzig) Penzig & Saccardo
 13160 *Lupinus* sp. - lupin - leaves and stem. UK 1994. From R. Lardner 20-305 ← IMI 351244 ← Sreenivasaprasad.
 13161 *Lupinus* sp. - lupin - leaves and stem. UK 1994. From R. Lardner 20-306 ← IMI 351250 ← Sreenivasaprasad.
 13162 *Lupinus* sp. - lupin - leaves and stem. UK 1994. From R. Lardner 20-307 ← IMI 351251 ← Sreenivasaprasad.
 13163 *Lupinus* sp. - lupin - leaves and stem. UK 1994. From R. Lardner 20-308 ← IMI 351259 ← Sreenivasaprasad.
 13164 *Lupinus* sp. - lupin - leaves and stem. UK. From R. Lardner 20-309 ← IMI 351260 ← Sreenivasaprasad.

Helminthosporium rostratum.

see *Setosphaeria rostrata* Leonard

Helminthosporium sativum.

see *Cochliobolus sativus* (Ito & Kuribayashi) Dreschler ex Dastur

Ileodictyon cibarium Tulasne

- 13675 Mulch. Auckland, AK, NZ Jul 1998. From R.E. Beever 876A.
 13676 Mulch. Auckland, AK, NZ Jul 1998. From R.E. Beever 876B.

Leptosphaeria maculans (Desmazieres) Cesati & de Notaris

anam. *Phoma lingam* (Tode) Desmazieres

- 13554 *Brassica rapa* L. - turnip - dry rot of turnip. Masterton, WA, NZ Feb 1998. From P.G. Broadhurst 98001.

Microdochium panattonianum (A.N. Berlese) Sutton, V.J. Galea & T.V. Price

syn. *Marssonina panattoniana* (Berlese) Magnus

- 13057 * *Lactuca sativa* L. - lettuce - ringspot of leaf. Pukekohe, AK, NZ 1995. From P.G. Broadhurst 95023 - *lettuce (Broadhurst).
 13058 * *Lactuca sativa* L. - lettuce - ringspot of leaf. Pukekohe, AK, NZ 1995. From P.G. Broadhurst 95025 - *lettuce (Broadhurst).
 13059 * *Lactuca sativa* L. - lettuce - ringspot of leaf. Pukekohe, AK, NZ 1995. From P.G. Broadhurst 95026 - *lettuce (Broadhurst).

Mucor sp.

- 13359 *Malus X domestica* Borkh. - apple cv. Worcester - shoot (1 year old). UK May 1997. From S. Langrell ENDO13.

Mycosphaerella sp.

- 13340 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 1 ← M.A. Manning.
 13341 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 2 ← M.A. Manning.
 13342 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 3 ← M.A. Manning.
 13343 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 4 ← M.A. Manning.
 13343 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 5 ← M.A. Manning.
 13345 *Malus X domestica* Borkh. - apple cv. Pacific Rose - mouldy core. Havelock North, HB, NZ Jul 1997. From P.R. Johnston 6 ← M.A. Manning.

Nectria galligena Bresadola

anam. *Cylindrocarpon heteronemum* (Berkeley & Broome) Wollenweber

anam. *Cylindrocarpon mali* (Allescher) Wollenweber

- 13255 *Malus X domestica* Borkh. - apple - germinating ascospores on branch canker. Mt Albert, AK, NZ Mar 1997. From P.R. Johnston.
 13256 *Malus X domestica* Borkh. - apple - diseased tissue at the margin of branch canker. Mt Albert, AK, NZ Mar 1997. From P.R. Johnston.
 13269 * *Malus X domestica* Borkh. - apple cv. McIntosh - cankered lesion on shoot. UK Sep 1994. From S.R.H. Langrell W28-94 - *apple fruit (Langrell).
 13270 * *Malus X domestica* Borkh. - apple maiden tree cv. Spartan - scion - canker lesion on root stock. UK Sep 1995. From S.R.H. Langrell W38-95 - *apple fruit (Langrell).
 13271 * *Malus X domestica* Borkh. - maiden apple tree cv. Spartan - developing scion. UK Sep 1995. From S.R.H. Langrell W39-95 - *apple fruit (Langrell).
 13272 * *Malus X domestica* Borkh. - maiden apple tree cv. Spartan - developing scion. UK Sep 1995. From S.R.H. Langrell W49-95 - *apple fruit (Langrell).
 13273 * *Malus X domestica* Borkh. - apple cv. Gloster 69. UK Apr 1996. From S.R.H. Langrell W55-96 - *apple fruit (Langrell).
 13274 * *Malus X domestica* Borkh. - maiden apple tree - cankered shoot. UK Aug 1996. From S.R.H. Langrell W59-96 - *apple fruit (Langrell).
 13275 * *Malus X domestica* Borkh. - apple cv. Gala - cankered lesion on shoot. UK Apr 1996. From S.R.H. Langrell W63-96 - *apple fruit (Langrell).

Nectria haematococca Berkeley & Broome

anam. *Fusarium solani* (Martius) Saccardo

- 13184 *Actinidia deliciosa* (Chev.) Liang & Ferguson - kiwifruit - stem. NZ. From E.H.C. McKenzie ← M. Braithwaite.
 13177 *Cucurbita maxima* Duch. - squash - fruit. Vanuatu Nov 1996. From E.H.C. McKenzie E5.
 13329 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95040.
 13330 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ May 1997. From P.G. Broadhurst 97011.

Ophiostoma piceae (Munch) H. Sydow & Sydow

syn. *Sporothrix* sp.

- 13185 *Pinus radiata* D. Don - pine. NZ. From E.H.C. McKenzie ← Wei-Young Wang ← R. Wakeling.

Ovulinia azaleae Weiss

- 13180 *Rhododendron indicum* (L.) Sweet - azalea - petal spot. Palmerston N., WI, NZ. From E.H.C. McKenzie ← M. Braithwaite.

Penicillium ? expansum Link

- 13362 *Malus* sp. - applewood, root stock M9 - below soil level of root stock. UK Apr 1996. From S. Langrell ENDO3 ← M. Lolas.
 13360 *Malus X domestica* Borkh. - apple cv. Falstaff - shoot. UK May 1997. From S. Langrell ENDO1.
 13361 *Malus X domestica* Borkh. - apple cv. Cox - shoot (2-3 years old). UK May 1997. From S. Langrell ENDO2.

Penicillium sp.

- 13558 *Ptychosperma* sp. - palm - dieback of trunk. Shirley, MC, NZ Mar 1998. From J. Frohlich.
 13559 *Ptychosperma* sp. - palm - dieback of trunk. Shirley, MC, NZ Mar 1998. From J. Frohlich.

Perenniporia ochroleuca (Berkeley) L. Ryvarden

- 13268 *Eucalyptus* sp. - fallen branch. Western Springs Lake, AK, NZ Jul 1985. From P.K. Buchanan 85-273 ← E.H.C. McKenzie = PDD 47801 - dikaryon.

Perenniporia podocarpi P.K. Buchanan & Hood

- 13263 *Dacrydium cupressinum* Lamb. - rimu - fallen wood. Okarito State Forest, WD, NZ Apr 1987. From P.K. Buchanan 87-145 = PDD 58346 - dikaryon.
 13264 *Dacrydium cupressinum* Lamb. - rimu - fallen wood. Garden Mound Scenic Reserve, SI, NZ Apr 1985. From P.K. Buchanan 85-183A = PDD 50607 - monokaryon derived by treatment of dikaryon on oxgall agar - Holotype specimen.
 13265 *Dacrydium cupressinum* Lamb. - rimu - fallen wood. Garden Mound Scenic Reserve, SI, NZ Apr 1985. From P.K. Buchanan 85-183B = PDD 50607 - monokaryon derived by treatment of dikaryon on oxgall agar - Holotype specimen.
 13266 *Dacrydium cupressinum* Lamb. - rimu - fallen wood. Garden Mound Scenic Reserve, SI, NZ Apr 1985. From P.K. Buchanan 85-183E = PDD 50607 - monokaryon derived by treatment of dikaryon on oxgall agar - Holotype specimen.
 13267 *Dacrydium cupressinum* Lamb. - rimu - fallen wood. Garden Mound Scenic Reserve, SI, NZ Apr 1985. From P.K. Buchanan 85-183H = PDD 50607 - monokaryon derived by treatment of dikaryon on oxgall agar - Holotype specimen.

Pestalotia sp.

- 13363 *Malus* sp. - applewood, root stock M9 - below soil level on root stock. UK Apr 1996. From S. Langrell ENDO22 ← M. Lolas.

Pezicula alba Guthrie

- anam. *Phlyctema vagabunda* Desmazieres
 13574 *Actinidia chinensis* Planch. - kiwifruit cv. Hort 16A - fruit storage rot. Te Puke, BP, NZ. From P.R. Johnston ← K. Everett.

Phoma chrysanthimicola Hollos

- 13666 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem vascular tissue. WO, NZ Oct 1993. From P.G. Broadhurst 9397.

Phoma clematidina (von Thumen) Boerema.

- 13664 *Clematis ligusticifolia* Nutt. - leafspot. USA Sep 1991. From A.G. Spiers 30/32 = PDD 69379 - released as a control agent against *Clematis vitalba* 1997-8.
 13663 *Clematis vitalba* L. - old man's beard - leafspot. Switzerland Oct 1991. From A.G. Spiers 9 = PDD 69378.

Phoma exigua Desmazieres

- 13336 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95039.
 13339 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ May 1994. From P.G. Broadhurst 94114.

Phoma sp.

- 13257 *Glycyrrhiza glabra* L. - licorice - leafspot. Lincoln, MC, NZ Dec 1996. From P.G. Broadhurst ← J. Fletcher.
 13365 *Malus X domestica* Borkh. - apple cv. falstaff - shoot. UK May 1997. From S. Langrell ENDO8.

? *Phoma* sp.

- 13364 *Malus X domestica* Borkh. - apple cv. Cox - shoot (2 years old). UK May 1997. From S. Langrell ENDO7.

Phoma violicola P. Sydow.

- 13662 *Viola X Wittrockiana* Gams - pansy - stems and leaves. Auckland, AK, NZ Oct 1997. From C.F. Hill ← H.M. Dance LYN15654 - identified at CBS, Baarn.

Phoma wasabiae Yokogi

- 13278 * *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem leaf abscission area. WO, NZ Aug 1993. From P.G. Broadhurst 96030 - Crop Information Report No. 223 - single spore isolate of PGB9362 - *wasabi (Broadhurst).
 13279 * *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - dark vascular tissue of internal stem. WO, NZ Apr 1994. From P.G. Broadhurst 96031 - Crop Information Report No. 223 - single spore isolate of PGB94059 - *wasabi (Broadhurst).
 13280 * *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - leaf vein blackening. WO, NZ Sep 1993. From P.G. Broadhurst 96032 - Crop Information Report No. 223 - single spore isolate of PGB9371 - *wasabi (Broadhurst).
 13281 * *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - leaf vein. NZ. From P.G. Broadhurst 96033 - Crop Information Report No. 223 - single spore isolate of PGB9373 - *wasabi (Broadhurst).
 13667 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem, dark vascular streak. WO, NZ Apr 1994. From P.G. Broadhurst 94059.
 13668 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem rot. Canterbury, NZ Nov 1994. From P.G. Broadhurst 94204A.
 13669 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem rot. Canterbury, NZ Nov 1994. From P.G. Broadhurst 94204B.

Phomopsis asparagi (Saccardo) Grove

- 13088 *Asparagus officinalis* L. - asparagus - stem lesions. Western Samoa Sep 1996. From P.G. Broadhurst A.
 13089 *Asparagus officinalis* L. - asparagus - stem lesions. Western Samoa Sep 1996. From P.G. Broadhurst B.

- Phomopsis* sp
13556 *Malus X domestica* Borkh. - apple cv. Gala - shoot. UK Oct 1995. From S. Langrell ENDO14 ← M. Lolas.
- Phyllosticta* sp.
13188 *Teloepa speciosissima* (Sm.) R.Br. - waratah - leafspot. Katikati, BP, NZ. From H.M. Dance AN14501 - rec. as *Phyllostictina* sp..
- Phytophthora cactorum* (Lebert & Cohn) Schroeter
13679 *Vitex lucens* Kirk - puriri - roots. New Plymouth, TK, NZ Sep 1998. From C.F. Hill LYN16925.
- Phytophthora citricola* Sawada
13680 *Vitis* sp. - grape rootstock 3309 - roots. NZ Oct 1998. From C.F. Hill LYN16960.
- Phytophthora erythroseptica* Pethybridge
13677 *Solanum tuberosum* L. - potato - pink rot of tubers. Palmerston N., WI, NZ Jun 1998. From C.F. Hill LYN16661.
- Phytophthora nicotianae* Breda de Haan
13678 *Phebalium squameum* Druce - roots and lower stem. Katikati, BP, NZ May 1998. From C.F. Hill LYN16563.
- Phytophthora nicotianae* van Breda de Haan var. *parasitica* (Dastur) Waterhouse
13681 *Anthurium* sp. - anthurium - leaves. Ramarama, AK, NZ Oct 1998. From C.F. Hill LYN17022.
- Pirotaea falcata* P.R. Johnston
13381 *Olearia semidentata* Decne ex Hoof.f. - living leaves. Chatham Is., NZ Apr 1993. From P.R. Johnston D9115 = PDD 62647 - ex Type specimen.
- Pirotaea manihapua* P.R. Johnston
13382 *Phormium tenax* J.R. & G.Forst - harakeke, New Zealand flax - dead leaves. Hokitika, WD, NZ May 1994. From P.R. Johnston D1011 = PDD 68334 - ex Type specimen.
- Pirotaea palmicola* P.R. Johnston
13383 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen fronds. Hunua Ranges, AK, NZ Mar 1992. From P.R. Johnston D792 = PDD 60012 - ex Type specimen.
13384 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen fronds. Russell Forest, ND, NZ Apr 1992. From P.R. Johnston D809 = PDD 60281.
13385 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen fronds. Russell Forest, ND, NZ Apr 1992. From P.R. Johnston D810 = PDD 60282.
13386 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen fronds. Tangihua Forest, ND, NZ May 1992. From P.R. Johnston D827 = PDD 60277.
13552 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen leaves. Waitakere Ranges, AK, NZ May 1992. From P.R. Johnston D791 = PDD 60013.
13553 *Rhopalostylis sapida* Wendl. & Drude - nikau - dead, fallen leaves. Hunua Ranges, AK, NZ May 1996. From P.R. Johnston D1227 = PDD 65971.
- Plectosporium tabacinum* J.F.H. (van Beyma) M.E. Palm, W. Gams et Nirenberg
anam. *Microdochium tabacinum* (Beyma) Von Arx.
anam. *Fusarium tabacinum* (Beyma) W. Gams
13282 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - internal stem tissue. WO, NZ Aug 1993. From P.G. Broadhurst 9366 - Crop Information Report No. 223.
13283 *Eutrema wasabi* (Sieb.) Maxim. - Japanese horse radish, wasabi - stem vascular tissue. WO, NZ Nov 1993. From P.G. Broadhurst 9391 - Crop Information Report No. 223.
- Pleospora herbarum* (Persoon) Rabenhorst
13572 *Ulex europaeus* L. - gorse - leaf lesion. Rotorua, BP, NZ May 1998. From J. Frohlich.
- Pleospora tarda* Simmons
anam. *Stemphylium botryosum* Wallroth
13337 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ May 1994. From P.G. Broadhurst 94102.
13338 *Cucurbita maxima* Duch. - buttercup squash - storage rot. Pukekohe, AK, NZ Jul 1995. From P.G. Broadhurst 95038.
- Pycnopus coccineus* (Fries) Bondarzew & Singer
13182 *Pinus radiata* D.Don - radiata pine - dead tree approx 8 years old. Waipoua,, NZ Sep 1985. From P.K. Buchanan PKB85-303.
- Pyronema domesticum* (Sowerby) Saccardo
13061 From E. Ebbet ← ATCC 90890.
13573 Burnt soil. Netherlands Oct 1988. From H. Laird ← CBS 666.88 ← H.A. van der Aa 10555.
13682 Cotton gauze sterilised in ethylene oxide. Penrose, AK, NZ Sep 1998. From E. Ebbertt.
- Rhizopus stolonifer* Vuillemin
13555 *Cucurbita pepo* L. var. *melopepo* (L.) Alef. - courgette - fruit. Mt Albert, AK, NZ Mar 1998. From E.H.C. McKenzie.
- Schizophyllum commune* Fries
13580 USA. From R.E. Beever 869-1 ← CBS 340.81 ← J.R. Raper.
13581 USA. From R.E. Beever 869-2 ← CBS 341.81 ← J.R. Raper.

Sclerotinia minor Jagger

- 13156 *Ipomoea batatas* (L.) Lam. - kumara cv. Toka Toka Gold - basal stem rot. Dargaville, ND, NZ Feb 1996. From P.G. Broadhurst 96001.
 13157 *Ipomoea batatas* (L.) Lam. - kumara cv. Owairaka Red - storage rot. Dargaville, ND, NZ Mar 1996. From P.G. Broadhurst 96002.

Sclerotinia sclerotiorum (Libert) de Bary

- 13158 *Ipomoea batatas* (L.) Lam. - kumara - basal stem rot. Pukekohe, AK, NZ Apr 1994. From P.G. Broadhurst 94186.
 13159 *Ipomoea batatas* (L.) Lam. - kumara - stem lesion. Pukekohe, AK, NZ Mar 1996. From P.G. Broadhurst 96003 - re-isolate from field trial with ICMP 13158.

Sclerotium cepivorum Berkeley

- 13186 *Allium cepa* L. - onion - bulb. Pukekohe, AK, NZ. From E.H.C. McKenzie.

Scopulariopsis brevicaulis (Saccardo) Bainier

- 13155 Silkworm crysalis. From E. Ebbert ← ATCC 36840 ← A. Bruxelles 1395 - used for fungal resistance testing.

Setosphaeria rostrata Leonard

- anam. *Drechslera rostrata* (Drechsler) Richardson & Fraser.
 anam. *Exserohilum rostratum* (Drechsler) Leonard & Suggs
 13660 *Arecaceae* - unknown palm - leaf. Australia Aug 1998. From C.F. Hill LYN16896.
 13652 *Phylaris* sp. India. From R. Chand RCHRP5.
 13653 *Setaria glauca* (auct.non L.) Beauv. - yellow bristlegrass. India. From R. Chand RCHRS6.
 13582 *Triticum aestivum* L. - wheat. India. From R. Chand RCHRW1.

Setosphaeria turcica (Luttrell) Leonard & Suggs

- syn. *Trichometasphaeria turcica* Luttrell
Exserohilum turcicum (Passerini) Leonard & Suggs
Drechslera turcica (Passerini) Subramanian & Jain
 13084 *Zea mays* L. - maize - northern leaf blight. Hamilton, WO, NZ Feb 1996. From P.G. Broadhurst 96017.
 13085 *Zea mays* L. - maize - northern leaf blight. Kihikihi, WO, NZ Feb 1996. From P.G. Broadhurst 96018.
 13086 *Zea mays* L. - maize - northern leaf blight. Pukekohe, AK, NZ Mar 1996. From P.G. Broadhurst 96019.
 13087 *Zea mays* L. - maize - northern leaf blight. Pukekohe, AK, NZ Mar 1996. From P.G. Broadhurst 96020.

Stemphylium lancipes (Ellis & Everhart) E. Simmons

- syn. *Alternaria lancipes* (Ellis & Everhart) Mason
 13579 *Aquilegia* sp. - columbine - grannys' bonnets cv. Biedermeier - stem and leaves. Kihikihi, WO, NZ Jul 1998. From H.M. Dance LYN16706.

Trichocladium basicola (Berkeley & Broome) Carmichael

- syn. *Thielaviopsis basicola* (Berkeley & Broome) Ferraris
Chalara elegans Naj Raj & Kendrick
 13276 *Ipomoea batatas* (L.) Lam. - kumara - rot of storage root. Dargaville, ND, NZ Oct 1995. From P.G. Broadhurst 95102.

Trichoderma sp.

- 13366 *Malus* sp. - applewood, root stock M9 - below soil on root stock. UK Mar 1996. From S. Langrell ENDO5 ← M. Lolás.
 13367 *Malus X domestica* Borkh. - apple cv. Gala - shoot (first year growth). UK Jun 1997. From S. Langrell ENDO6 ← M. Lolás.

Unidentified strain

- 13368 *Malus X domestica* Borkh. - apple cv. Worcester - shoot (3 years old). UK Jun 1997. From S. Langrell ENDO24.

Venturia inaequalis (Cooke) Winter

- anam. *Spilocaea pomi* Fries
 13258 *Malus X domestica* Borkh. - apple cv. Granny Smith - leaf lesion. Huapai, AK, NZ Jan 1996. From M. Hemming MNH120.
 13259 *Malus X domestica* Borkh. - apple cv. Braeburn - leaf lesion. Kumeu, AK, NZ Jan 1996. From M. Hemming MNH127.
 13260 *Malus X domestica* Borkh. - apple cv. Fuji - fruit lesion. WO, NZ Feb 1996. From M. Hemming MNH138.
 13261 *Malus X domestica* Borkh. - apple cv. Royal Gala - leaf lesion. WO, NZ Feb 1996. From M. Hemming MNH141.
 13262 *Malus X domestica* Borkh. - apple cv Braeburn - leaf lesion. Oratia, AK, NZ Jan 1996. From M. Hemming MNH144.

Wiesneriomyces javanicus Koorders

- 13181 *Zingiber officinale* Rosc. - ginger - rhizome. Vanuatu Oct 1996. From E.H.C. McKenzie.

PLANT/ MICRO-ORGANISM INDEX

- Abelmoschus manihot* (L.) Medic
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- Actinidia chinensis* Planch.
Pezizula alba
Pseudomonas viridiflava
- Actinidia deliciosa* (Chev.) Liang & Ferguson
Diaporthe actinidiae
Nectria haematococca
Pseudomonas syringae
Pseudomonas viridiflava
- Aeschynomene falcata* (Poir.) DC.
Rhizobium sp.
- Agaricus bisporus* (Lange) Imbach
Pseudomonas agarici
Pseudomonas sp.
Pseudomonas tolaasii
- Allium cepa* L.
Burkholderia gladioli pv. *alliiicola*
Fusarium sp.
Sclerotium cepivorum
- Alnus subcordata* (Loisel.) Duby
Xanthomonas sp.
- Anagallis arvensis* L.
Alternaria anagallidis
- Anthoxanthum odoratum* L.
Thozetella tocklaiensis
- Anthurium* sp.
Acidovorax sp.
Phytophthora nicotianae var. *parasitica*
- Aphelandra squarrosa* Nees
Erwinia carotovora subsp. *carotovora*
- Aquilegia* sp.
Stemphylium lancipes
- Argyranthemum frutescens* Simmons & C.F. Hill
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- Arracacia xanthorizza* E.N.Bancr.
Pseudomonas cichorii
- Arracacia xanthorriza* E.N.Bancr.
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- Asparagus officinalis* L.
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- Astragalus cicer* L.
Rhizobium sp.
- Berberidis* sp.
Pseudomonas syringae pv. *berberidis*
- Beta vulgaris* L.
Pseudomonas syringae
- Brassica oleracea* L. var. *capitata* L.
Pseudomonas syringae pv. *maculicola*
- Brassica rapa* L.
Leptosphaeria maculans
- Broussonetia kazinoki* Sieb. X *Broussonetia papyrifera* Vent.
Pseudomonas syringae pv. *broussonetiae*
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- Camellia japonica* L.
Ciborinia camelliae
- Capsicum annuum* L.
- Clavibacter michiganensis* subsp. *michiganensis*
Colletotrichum coccodes
Glomerella cingulata
- Carica papaya* L.
Fusarium pallidoroseum
- Carmichaelia cunninghamii* Raoul
Rhizobium sp.
- Carmichaelia flagelliformis* Col. ex Hook.f.
Rhizobium sp.
- Carmichaelia robusta* Kirk
Rhizobium sp.
- Carmichaelia violacea* Kirk
Rhizobium sp.
- Castanea sativa* Miller
Xanthomonas sp.
- Catharanthus roseus* (L.) G.Don
Xanthomonas campestris pv. *catharanthii*
- Chrysanthemum segetum* L.
Alternaria
- Chrysanthemum X morifolium* Ramat.
Agrobacterium tumefaciens
- Citrullus lanatus* (Thunb.) Matsum. & Nakai
Acidovorax avenae subsp. *citrulli*
Colletotrichum orbiculare
- Citrus aurantiifolia* (Christm.) Swingle
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- Citrus aurantium* L.
Pseudomonas viridiflava
- Citrus limon* (L.) Burm.f.
Glomerella cingulata
- Citrus sinensis* (L.) Osbeck
Glomerella cingulata
- Citrus* sp.
Glomerella cingulata
- Clematis ligusticifolia* Nutt.
Phoma clematidina
- Clematis vitalba* L.
Phoma clematidina
- Clianthus puniceus* (G. Don) Sol. ex Lindl.
Rhizobium sp.
- Cordia goeldiana* Huber
Xanthomonas campestris
- Cotoneaster* sp.
Erwinia amylovora
- Cotoneaster* sp.
Erwinia amylovora
- Craspedia incana* Allan
Agrobacterium sp.
- Cucumis melo* L.
Acidovorax avenae subsp. *citrulli*
Pseudomonas cichorii
- Cucumis sativus* L.
Fusarium oxysporum f. sp. *cucumerina*
- Cucurbita maxima* Duch.
Didymella bryoniae
Fusarium crookwellense
Fusarium culmorum
Fusarium oxysporum

- Fusarium pallidoroseum*
Fusarium semitectum
Gibberella avenacea
Gibberella intricans
Gibberella pulicaris
Gibberella zeae
Gliocladium sp.
Glomerella cingulata
Nectria haematococca
Phoma exigua
Pleospora tarda
- Cucurbita pepo* L. var. *melopepo* (L.) Alef.
Rhizopus stolonifer
- Cucurbita* sp.
Colletotrichum coccodes
- Cydonia oblonga* Mill.
Erwinia amylovora
- Cymbidium* sp.
Fusarium subglutinans
- Cyphomandra betacea* (Cav.) Sendtn.
Glomerella cingulata
- Dacrydium cupressinum* Lamb.
Perenniporia podocarpi
- Dahlia* sp.
Pseudomonas fluorescens
- Delphinium* sp.
Pseudomonas syringae pv. *delphini*
- Dendrobium* sp.
Burkholderia gladioli
- Dianthus caryophyllus* L.
? *Acinetobacter* sp.
Fusarium oxysporum f. sp. *dianthi*
- Dicksonia antarctica* Labill.
Coccomyces crystalligerus
- Diffenbachia maculata* (C. & G. Lodd.) G. Don
Erwinia carotovora subsp. *carotovora*
- Diospyros kaki* L.f.
Glomerella cingulata
- Eschscholzia californica* Cham.
Verticillium nigrescens
- Eucalyptus* sp.
Coccomyces globosus
Perenniporia ochroleuca
- Euphorbia pulcherrima* Willd. ex Klotsch.
Clavibacter sp.
- Eutrema wasabi* (Sieb.) Maxim.
Phoma chrysanthimicola
Phoma wasabiae
Plectosporium tabacinum
- Fagus sylvatica* L.
Verticillium dahliae
- Fragaria X ananassa* Duch.
Glomerella miyabeana
Xanthomonas fragariae
- Fraxinus* sp.
Pseudomonas savastanoi
- Glycine max* (L.) Merr.
Bradyrhizobium elkani
Rhizobium sp.
- Sinorhizobium fredii*
- Glycyrrhiza glabra* L.
Phoma sp.
- Gossypium* sp.
Cercospora canescens
- Hippeastrum X hybridum*
Erwinia carotovora subsp. *carotovora*
- Holcus lanatus* L.
Dilophospora alopecuri
- Ipomoea batatas* (L.) Lam.
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Sclerotinia minor
Sclerotinia sclerotiorum
Trichocladium basicola
- Juglans regia* L.
Pseudomonas flavescens
- Lactuca sativa* L.
Microdochium panattonianum
Pseudomonas marginalis
Pseudomonas marginalis pv. *marginalis*
- Lens culinaris* Medicus
Rhizobium sp.
- Leucaena leucocephala* (Lam.) de Wit
Rhizobium sp.
- Lophostemon confertus* (R.Br.) P.G. Wilson
Coccomyces globosus
- Lotus corniculatus* L.
Rhizobium sp.
- Lupinus* sp.
Glomerella cingulata
- Lycoperdon* sp.
Pseudomonas tolaasii
- Lycopersicon esculentum* Mill.
Burkholderia solanacearum
Clavibacter sp.
Colletotrichum coccodes
Erwinia carotovora subsp. *carotovora*
Glomerella cingulata
Pseudomonas syringae pv. *tomato*
- Magnolia* sp.
Pseudomonas sp.
- Malus* sp.
Alternaria alternata
Epicoccum sp.
Fusarium sp.
Penicillium ?expansum
Pestalotia sp.
Trichoderma sp.
- Malus X domestica* Borkh.
Aureobasidium pullulans
Botryosphaeria dothidea
Botryosphaeria obtusa
Botryosphaeria stevensii
Botrytis sp.
Cladosporium ?herbarum
Cladosporium sp.
Colletotrichum acutatum
Erwinia amylovora
Erwinia herbicola
Fusarium sp.
Mucor sp.

- Mycosphaerella* sp.
Nectria galligena
Penicillium ?expansum
Phoma sp.
 ?*Phoma* sp.
Phomopsis sp.
Trichoderma sp.
 Unidentified strain
Venturia inaequalis
- Marsypianthes* sp. (as *M. chamaedris*)
Burkholderia solanacearum
- Matthiola incana* (L.) R.Br.
Xanthomonas campestris pv. *incanae*
- Medicago ruthenica* Trautv.
Rhizobium mongolense
- Medicago sativa* L.
Colletotrichum trifolii
- Medicago sativa* L. subsp. *sativa* L.
Rhizobium melliloti
- Mespilus germanica* L.
Erwinia amylovora
- Morus alba* L.
Xanthomonas campestris pv. *mori*
- Morus* sp.
Pseudomonas syringae pv. *syringae*
- Murraya paniculata* (L.) Jack
Pseudomonas cichorii
- Musa* sp.
Colletotrichum musae
- Neptunia gracilis* Benth.
Rhizobium sp.
- Nerium oleander* L.
Pseudomonas savastanoi
Pseudomonas savastanoi pv. *nerii*
- Nothofagus moorei* Maiden.
Coccomyces radiatus
- Olea europaea* L.
Agrobacterium tumefaciens
Pseudomonas savastanoi
Pseudomonas savastanoi pv. *savastanoi*
 Unknown - rec. as *Xanthomonas campestris*
Xanthomonas sp.
- Olearia semidentata* Decne ex Hoof.f.
Pirotaea falcata
- Ornithopus perpusillus* L.
Rhizobium sp.
- Pachystachys lutea* Nees
Xanthomonas campestris pv. *viegasii*
- Panicum miliaceum* L.
Acidovorax avenae subsp. *avenae*
- Parochetus communis* Buch.-Ham.ex D.Don
Rhizobium sp.
- Persea americana* Mill.
Colletotrichum acutatum
Glomerella cingulata
- Petroselinum crispum* (Mill.) A.W.Hill
Erwinia sp.
- Petunia X hybrid* Hort. Vilm.-Andr.
Rhodococcus fascians
- Phaseolus vulgaris* L.
Aphanomyces euteiches
Cercospora canescens
Curtobacterium flaccumfaciens pv. *flaccumfaciens*
- Rhizobium* sp.
- Phebalium squameum* Druce
Phytophthora nicotianae
- Phormium tenax* J.R. & G.Forst
Pirotaea manihapua
- Photinia* sp.
Erwinia amylovora
- Phylaris* sp.
Setosphaeria rostrata
- Phyllocladus aspleniifolius* (Labillardiere) Hook.f.
Coccomyces phyllocladi
- Phylodendron* sp.
Pseudomonas cichorii
- Pinus radiata* D.Don
Ophiostoma piceae
Pycnoporus coccineus
- Pisum sativum* L.
Aphanomyces euteiches
Pseudomonas syringae pv. *pisi*
Rhizobium leguminosarum biovar *viciae*
Rhizobium sp.
- Pisum sativum* L. var. *arvense* (L.) Poir.
Rhizobium sp.
- Pleurotus eryngii* (D.C.: Fr.) Quel.
Pseudomonas sp.
- Pleurotus ostreatus* (Jacquin) Kummer
Pseudomonas sp.
Pseudomonas tolaasii
- Prunus armeniaca* L.
Pseudomonas syringae pv. *syringae*
Xanthomonas campestris pv. *pruni*
- Prunus persica* (L.) Batsch
Agrobacterium rhizogenes (tumourigenic strain)
Botrytis cinerea
- Prunus persica* (L.) Batsch. var. *nucipersica* (Suckow.) C.K.Schneid
Xanthomonas campestris pv. *pruni*
- Prunus salicina* Lindl.
Xanthomonas campestris pv. *pruni*
- Prunus* sp.
Xanthomonas campestris pv. *pruni*
- Psidium guajava* L.
Erwinia psidii
- Ptychosperma* sp.
Penicillium sp.
- Pyrus calleryana* Decne.
Pseudomonas syringae pv. *syringae*
- Pyrus communis* L.
Colletotrichum acutatum
Erwinia amylovora
Pseudomonas syringae pv. *syringae*
- Pyrus pyrifolia* (Burm.f.) Nakai
Glomerella miyabeana
- Rhododendron indicum* (L.) Sweet
Ovulinia azaleae
- Rhopalostylis sapida* Wendl. & Drude
Pirotaea palmicola
- Robinia pseudoacacia* L.
Rhizobium sp.
- Saccharum officinarum* L.
Acidovorax avenae subsp. *avenae*
Acidovorax avenae subsp. *cattleyae*

- Salix* sp.
Erwinia salicis
Glomerella miyabeana
- Schizomeria ovata* D.Don
Coccomyces tympanibaculi
- Scleroderma* sp.
Pseudomonas tolaasii
- Sesbania aculeata* Poir.
Rhizobium sp.
- Sesbania herbacea* (Mill.) R.McVaugh
Rhizobium huautlense
- Setaria glauca* (auct.non L.) Beauv.
Setosphaeria rostrata
- Sloanea australis* F.Muell.
Coccomyces walkeri
- Solanum tuberosum* L.
Burkholderia solanacearum
Phytophthora erythroseptica
Streptomyces europeaniscabies [scabieieuropaei]
Streptomyces reticuliscabies [reticulatiscabiei]
Streptomyces stellaescabies [stellatiscabiei]
- Sonchus oleraceus* L.
Alternaria sonchi
- Sorbus aria* (L.) Crantz
Erwinia amylovora
- Spinacia oleracea* L.
Pseudomonas viridiflava
- Telopea speciosissima* (Sm.) R.Br.
Phyllosticta sp.
- Tristania conferta* R.Br.
Cercospora sp.
- Triticale* sp.
Cochliobolus sativus
- Triticum aestivum* L.
Ceratocystis paradoxa
Cochliobolus sativus
Rathayibacter iranicus
Setosphaeria rostrata
- Ulex europaeus* L.
Pleospora herbarum
- Valerianella locusta* (L.) Laterr.
Acidovorax sp.
- Vicia faba* L.
Aphanomyces euteiches
Rhizobium sp.
- Vigna mungo* (L.) Hepper
Cercospora canescens
- Vigna radiata* (L.) R. Wilcz.
Cercospora canescens
- Vigna radiata* (L.) R.Wilcz.
Pseudomonas savastanoi pv. *phaseolicola*
- Viola X Wittrockiana* Gams
Phoma violicola
- Vitex lucens* Kirk
Phytophthora cactorum
- Vitis* sp.
Phytophthora citricola
- Vitis vinifera* L.
Pseudomonas syringae
Xanthomonas campestris pv. *viticola*
- Zantedeschia aethiopica* (L.) Spreng.
Erwinia carotovora subsp. *carotovora*
- Zea mays* L.
Aureobasidium zeae
Fusarium crookwellense
Fusarium culmorum
Fusarium oxysporum
Fusarium pallidoroseum
Fusarium subglutinans
Gibberella fujikuroi
Gibberella zeae
Setosphaeria turcica
- Zingiber mioga* Rosc.
Dactylaria acerosa
- Zingiber officinale* Rosc.
Erwinia chrysanthemi
Wiesneriomyces javanicus
- Zinnia elegans* Jacq.
Alternaria zinniae
Xanthomonas campestris pv. *zinniae*

STRAIN NUMBERS

12990	? <i>Acinetobacter</i> sp. - <i>Dianthus caryophyllus</i>	13114	? <i>Acidovorax</i> sp. - Oil contaminated soil
12991	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13115	<i>Comamonas acidovorans</i> - River sediment
12992	<i>Bacillus thuringiensis</i> (non-motile)	13116	<i>Comamonas</i> sp. - Evaporation pond
13051	<i>Pseudomonas syringae</i> pv. <i>maculicola</i> - <i>Brassica oleracea</i>	13117	<i>Mycobacterium</i> sp. - Sediment near oilfield
13052	<i>Pseudomonas syringae</i> pv. <i>delphini</i> - <i>Delphinium</i> sp.	13118	<i>Pseudomonas aeruginosa</i> - Oil contaminated soil
13053	<i>Pseudomonas syringae</i> pv. <i>delphini</i> - <i>Delphinium</i> sp.	13119	<i>Pseudomonas fluorescens</i> - Oil contaminated soil
13054	<i>Pseudomonas marginalis</i> - <i>Lactuca sativa</i>	13120	Unidentified bacterium - possibly <i>Comamonadaceae</i>
13055	<i>Pseudomonas marginalis</i> - <i>Lactuca sativa</i>	13121	Unidentified bacterium - DDT contaminated soils
13056	<i>Xanthomonas campestris</i> - <i>Cordia goeldiana</i>	13122	<i>Burkholderia solanacearum</i> - <i>Solanum tuberosum</i>
13057	<i>Microdochium panattonianum</i> - <i>Lactuca sativa</i>	13123	<i>Pseudomonas tolaasii</i> - <i>Agaricus bisporus</i>
13058	<i>Microdochium panattonianum</i> - <i>Lactuca sativa</i>	13124	<i>Pseudomonas tolaasii</i> - <i>Scleroderma</i> sp.
13059	<i>Microdochium panattonianum</i> - <i>Lactuca sativa</i>	13125	<i>Pseudomonas tolaasii</i> - <i>Lycoperdon</i> sp.
13060	<i>Aureobasidium pullulans</i>	13126	<i>Rathayibacter iranicus</i> - <i>Triticum aestivum</i>
13061	<i>Pyronema domesticum</i>	13127	<i>Rathayibacter iranicus</i> - <i>Triticum aestivum</i>
13062	<i>Ceratocystis paradoxa</i> - <i>Triticum aestivum</i>	13128	<i>Pseudomonas syringae</i> pv. <i>tomato</i> - <i>Lycopersicon</i> ...
13063	<i>Botrytis cinerea</i>	13129	<i>Acidovorax avenae</i> subsp. <i>avenae</i> - <i>Saccharum officinarum</i>
13064	<i>Botrytis cinerea</i>	13130	<i>Acidovorax avenae</i> subsp. <i>avenae</i> - <i>Saccharum officinarum</i>
13065	<i>Botrytis cinerea</i>	13131	<i>Acidovorax avenae</i> subsp. <i>avenae</i> - <i>Saccharum officinarum</i>
13066	<i>Botrytis cinerea</i>	13132	<i>Acidovorax avenae</i> subsp. <i>avenae</i> - <i>Saccharum officinarum</i>
13067	<i>Botrytis cinerea</i>	13133	<i>Acidovorax avenae</i> subsp. <i>avenae</i>
13068	<i>Botrytis cinerea</i>	13134	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13069	<i>Botrytis cinerea</i>	13135	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13070	<i>Gibberella zeae</i> - <i>Zea mays</i>	13136	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13071	<i>Aureobasidium zeae</i> - <i>Zea mays</i>	13137	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13072	<i>Fusarium crookwellense</i> - <i>Zea mays</i>	13138	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13073	<i>Aureobasidium zeae</i> - <i>Zea mays</i>	13139	<i>Nitrosomonas europaea</i>
13074	<i>Fusarium culmorum</i> - <i>Zea mays</i>	13140	<i>Nitrobacter winogradskyi</i>
13075	<i>Fusarium subglutinans</i> - <i>Zea mays</i>	13141	<i>Erwinia carotovora</i> subsp. <i>carotovora</i> - <i>Lycopersicon</i>
13076	<i>Fusarium oxysporum</i> - <i>Zea mays</i>	13142	<i>Rhizobium</i> sp. - <i>Lotus corniculatus</i>
13077	<i>Fusarium oxysporum</i> - <i>Zea mays</i>	13143	<i>Rhizobium</i> sp. - <i>Pisum sativum</i>
13078	<i>Fusarium oxysporum</i> - <i>Zea mays</i>	13144	<i>Rhizobium</i> sp. - <i>Sesbania aculeata</i>
13079	<i>Fusarium oxysporum</i> - <i>Zea mays</i>	13145	<i>Rhizobium</i> sp. - <i>Neptunia gracilis</i>
13080	<i>Fusarium oxysporum</i> f. sp. <i>dianthi</i> - <i>Dianthus caryophyllus</i>	13146	<i>Rhizobium</i> sp. - <i>Ornithopus perpusillus</i>
13081	<i>Gibberella zeae</i> - <i>Zea mays</i>	13147	<i>Rhizobium</i> sp. - <i>Robinia pseudoacacia</i>
13082	<i>Gibberella zeae</i> - <i>Zea mays</i>	13148	<i>Rhizobium</i> sp. - <i>Leucaena leucocephala</i>
13083	<i>Gibberella zeae</i> - <i>Zea mays</i>	13149	<i>Rhizobium</i> sp.
13084	<i>Setosphaeria turcica</i> - <i>Zea mays</i>	13150	<i>Rhizobium</i> sp. - <i>Lens culinaris</i>
13085	<i>Setosphaeria turcica</i> - <i>Zea mays</i>	13151	<i>Rhizobium</i> sp. - <i>Vicia faba</i>
13086	<i>Setosphaeria turcica</i> - <i>Zea mays</i>	13152	<i>Rhizobium</i> sp. - <i>Leucaena leucocephala</i>
13087	<i>Setosphaeria turcica</i> - <i>Zea mays</i>	13153	<i>Rhizobium</i> sp. - <i>Phaseolus vulgaris</i>
13088	<i>Phomopsis asparagi</i> - <i>Asparagus officinalis</i>	13154	<i>Rhizobium</i> sp. - <i>Carmichaelia robusta</i>
13089	<i>Phomopsis asparagi</i> - <i>Asparagus officinalis</i>	13155	<i>Scopulariopsis brevicaulis</i> - Silkworm crysalis
13090	<i>Xanthomonas campestris</i> - <i>Cordia goeldiana</i>	13156	<i>Sclerotinia minor</i> - <i>Ipomoea batatas</i>
13091	<i>Xanthomonas campestris</i> pv. <i>viegasii</i> - <i>Pachystachys lutea</i>	13157	<i>Sclerotinia minor</i> - <i>Ipomoea batatas</i>
13092	<i>Xanthomonas campestris</i> pv. <i>viegasii</i> - <i>Pachystachys lutea</i>	13158	<i>Sclerotinia sclerotiorum</i> - <i>Ipomoea batatas</i>
13093	<i>Xanthomonas campestris</i> pv. <i>viegasii</i> - <i>Pachystachys lutea</i>	13159	<i>Sclerotinia sclerotiorum</i> - <i>Ipomoea batatas</i>
13094	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13160	<i>Glomerella cingulata</i> - <i>Lupinus</i> sp.
13095	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13161	<i>Glomerella cingulata</i> - <i>Lupinus</i> sp.
13096	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13162	<i>Glomerella cingulata</i> - <i>Lupinus</i> sp.
13097	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13163	<i>Glomerella cingulata</i> - <i>Lupinus</i> sp.
13098	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13164	<i>Glomerella cingulata</i> - <i>Lupinus</i> sp.
13099	<i>Pseudomonas syringae</i> - <i>Vitis vinifera</i>	13165	<i>Botrytis cinerea</i>
13100	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13166	<i>Botrytis cinerea</i>
13101	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13167	<i>Botrytis cinerea</i>
13102	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13168	<i>Botrytis cinerea</i>
13103	<i>Pseudomonas syringae</i> - <i>Actinidia deliciosa</i>	13169	<i>Botrytis cinerea</i>
13104	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13170	<i>Botrytis cinerea</i>
13105	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13171	<i>Fusarium oxysporum</i> - <i>Cucurbita maxima</i>
13106	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13172	<i>Fusarium pallidoroseum</i> - <i>Cucurbita maxima</i>
13107	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13173	<i>Fusarium pallidoroseum</i> - <i>Carica papaya</i>
13108	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13174	<i>Fusarium pallidoroseum</i> - <i>Zea mays</i>
13109	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13175	<i>Gibberella fujikuroi</i> - <i>Zea mays</i>
13110	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13176	<i>Gibberella zeae</i> - <i>Zea mays</i>
13111	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13177	<i>Nectria haematococca</i> - <i>Cucurbita maxima</i>
13112	<i>Pseudomonas viridiflava</i> - <i>Actinidia deliciosa</i>	13178	<i>Dactylaria acerosa</i> - <i>Zingiber mioga</i>
13113	<i>Acidovorax delafieldii</i> - River sediment	13179	<i>Fusarium oxysporum</i> - <i>Abelmoschus manihot</i>

13180	<i>Ovulinia azaleae</i> - <i>Rhododendron indicum</i>	13256	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13181	<i>Wiesneriomyces javanicus</i> - <i>Zingiber officinale</i>	13257	<i>Phoma</i> sp. - <i>Glycyrrhiza glabra</i>
13182	<i>Pycnoporus coccineus</i> - <i>Pinus radiata</i>	13258	<i>Venturia inaequalis</i> - <i>Malus X domestica</i>
13183	<i>Fusarium</i> sp. - <i>Allium cepa</i>	13259	<i>Venturia inaequalis</i> - <i>Malus X domestica</i>
13184	<i>Nectria haematococca</i> - <i>Actinidia deliciosa</i>	13260	<i>Venturia inaequalis</i> - <i>Malus X domestica</i>
13185	<i>Ophiostoma piceae</i> - <i>Pinus radiata</i>	13261	<i>Venturia inaequalis</i> - <i>Malus X domestica</i>
13186	<i>Sclerotium cepivorum</i> - <i>Allium cepa</i>	13262	<i>Venturia inaequalis</i> - <i>Malus X domestica</i>
13187	<i>Cercospora</i> sp. - <i>Tristania conferta</i>	13263	<i>Perenniporia podocarpi</i> - <i>Dacrydium cupressinum</i>
13188	<i>Phyllosticta</i> sp. - <i>Telopea speciosissima</i>	13264	<i>Perenniporia podocarpi</i> - <i>Dacrydium cupressinum</i>
13189	<i>Rhizobium</i> sp. - <i>Clianthus puniceus</i>	13265	<i>Perenniporia podocarpi</i> - <i>Dacrydium cupressinum</i>
13190	<i>Rhizobium</i> sp. - <i>Carmichaelia violacea</i>	13266	<i>Perenniporia podocarpi</i> - <i>Dacrydium cupressinum</i>
13191	<i>Rhizobium</i> sp. - <i>Astragalus cicer</i>	13267	<i>Perenniporia podocarpi</i> - <i>Dacrydium cupressinum</i>
13192	<i>Rhizobium</i> sp. - <i>Parochetus communis</i>	13268	<i>Perenniporia ochroleuca</i> - <i>Eucalyptus</i> sp.
13193	<i>Rhizobium</i> sp. - <i>Robinia pseudoacacia</i>	13269	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13194	<i>Rhizobium</i> sp. - <i>Carmichaelia flagelliformis</i>	13270	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13195	<i>Rhizobium</i> sp. - <i>Glycine max</i>	13271	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13196	<i>Rhizobium</i> sp. - <i>Carmichaelia robusta</i>	13272	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13197	<i>Rhizobium</i> sp. - <i>Carmichaelia cunninghamii</i>	13273	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13198	<i>Clavibacter</i> sp. - <i>Lycopersicon esculentum</i>	13274	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13199	<i>Xanthomonas campestris</i> pv. <i>mori</i> - <i>Morus alba</i>	13275	<i>Nectria galligena</i> - <i>Malus X domestica</i>
13200	<i>Acidovorax avenae</i> subsp. <i>avenae</i> - <i>Panicum miliaceum</i>	13276	<i>Trichocladium basicola</i> - <i>Ipomoea batatas</i>
13201	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Cucumis melo</i>	13277	<i>Fusarium subglutinans</i> - <i>Cymbidium</i> sp.
13202	<i>Erwinia carotovora</i> subsp. <i>carotovora</i> - <i>Diffenbachia maculata</i>	13278	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13203	<i>Pseudomonas cichorii</i> - <i>Murraya paniculata</i>	13279	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13204	<i>Pseudomonas cichorii</i> - <i>Phylodendron</i> sp.	13280	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13205	<i>Pseudomonas cichorii</i> - <i>Cucumis melo</i>	13281	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13206	<i>Burkholderia gladioli</i> pv. <i>alliiicola</i> - <i>Allium cepa</i>	13282	<i>Plectosporium tabacinum</i> - <i>Eutrema wasabi</i>
13207	<i>Pseudomonas marginalis</i> pv. <i>marginalis</i> - <i>Lactuca sativa</i>	13283	<i>Plectosporium tabacinum</i> - <i>Eutrema wasabi</i>
13208	<i>Burkholderia solanacearum</i> - <i>Marsypianthes</i> sp.	13284	<i>Gibberella avenacea</i> - <i>Cucurbita maxima</i>
13209	<i>Xanthomonas campestris</i> pv. <i>arracaciae</i> - <i>Arracacia</i> ...	13285	<i>Fusarium crookwellense</i> - <i>Cucurbita maxima</i>
13210	<i>Xanthomonas campestris</i> pv. <i>arracaciae</i> - <i>Arracacia</i> ...	13286	<i>Fusarium culmorum</i> - <i>Cucurbita maxima</i>
13211	<i>Rhizobium</i> sp. - <i>Pisum sativum</i> var. <i>arvense</i>	13287	<i>Gibberella intricans</i> - <i>Cucurbita maxima</i>
13212	<i>Rhizobium</i> sp. - <i>Aeschynomene falcata</i>	13288	<i>Erwinia amylovora</i> - Pear cv. Brandywine
13213	<i>Mycobacterium</i> sp. - Bioremediation lagoon liquid with pyrene	13289	<i>Erwinia amylovora</i> - Pear cv. Brandywine
13214	<i>Mycobacterium</i> sp. - Stream sediment with pyrene	13290	<i>Erwinia amylovora</i> - Pyrus communis
13215	<i>Mycobacterium</i> sp. - Lagoon liquid with pyrene	13291	<i>Pseudomonas syringae</i> pv. <i>berberidis</i> - <i>Berberidis</i> sp.
13216	<i>Mycobacterium</i> sp. - Lagoon liquid with fluoranthene	13292	<i>Pseudomonas</i> sp. - <i>Magnolia</i> sp.
13217	<i>Mycobacterium</i> sp. - Contaminated soil with fluoranthene	13293	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13218	<i>Mycobacterium</i> sp. - Stream sediment with fluoranthene	13294	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13219	<i>Mycobacterium</i> sp. - Stream sediment with fluoranthene	13295	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13220	<i>Mycobacterium</i> sp. - Lagoon sediment with fluoranthene	13296	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13221	<i>Mycobacterium</i> sp. - Soil with fluoranthene	13297	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13222	<i>Mycobacterium</i> sp. - Lagoon water with fluoranthene	13298	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13223	<i>Mycobacterium</i> sp. - Lagoon liquid with fluoranthene	13299	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13224	<i>Mycobacterium</i> sp. - Stream sediment with fluoranthene	13300	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13225	<i>Mycobacterium</i> sp. - Stream sediment with fluoranthene	13301	<i>Erwinia herbicola</i> - <i>Malus X domestica</i>
13226	<i>Bacillus thuringiensis</i> serotype <i>colmari</i>	13302	<i>Pseudomonas viridiflava</i> - <i>Actinidia chinensis</i>
13227	<i>Bacillus thuringiensis</i> serotype <i>galleriae</i>	13303	<i>Pseudomonas viridiflava</i> - <i>Actinidia chinensis</i>
13229	<i>Bacillus thuringiensis</i> serotype <i>galleriae</i>	13304	<i>Xanthomonas</i> sp. - <i>Castanea sativa</i>
13230	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13305	<i>Xanthomonas campestris</i> pv. <i>incanae</i> - <i>Matthiola incana</i>
13231	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13306	<i>Acidovorax avenae</i> subsp. <i>cattleyae</i> - Orchid
13232	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13307	<i>Acidovorax avenae</i> subsp. <i>cattleyae</i> - Orchid
13233	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13308	<i>Acidovorax avenae</i> subsp. <i>cattleyae</i> - Orchid
13234	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13309	<i>Acidovorax avenae</i> subsp. <i>citrulli</i> - <i>Citrullus lanatus</i>
13235	<i>Bacillus thuringiensis</i> serotype <i>indiana</i>	13310	<i>Erwinia carotovora</i> subsp. <i>carotovora</i> - <i>Aphelandra squarrosa</i>
13236	<i>Bacillus thuringiensis</i> serotype <i>israeliensis</i>	13311	<i>Erwinia carotovora</i> subsp. <i>carotovora</i> - <i>Hippeastrum</i> X...
13237	<i>Bacillus thuringiensis</i> serotype <i>japonensis</i>	13312	<i>Erwinia chrysanthemi</i> - <i>Zingiber officinale</i>
13239	<i>Bacillus thuringiensis</i> serotype <i>kurstaki</i>	13313	<i>Erwinia psidii</i> - <i>Psidium guajava</i>
13240	<i>Bacillus thuringiensis</i> serotype <i>kurstaki</i>	13314	<i>Pseudomonas cichorii</i> - <i>Arracacia xanthorrhiza</i>
13242	<i>Bacillus thuringiensis</i> serotype <i>kurstaki</i>	13315	<i>Xanthomonas</i> sp. - <i>Catharanthus pusillus</i>
13243	<i>Bacillus thuringiensis</i> serotype <i>thuringiensis</i>	13316	<i>Xanthomonas</i> sp. - <i>Catharanthus pusillus</i>
13245	<i>Bacillus thuringiensis</i> serotype <i>wuhanensis</i>	13317	<i>Xanthomonas</i> sp. - <i>Catharanthus pusillus</i>
13246	<i>Bacillus thuringiensis</i> serotype <i>yunnanensis</i>	13318	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>
13247	<i>Erwinia amylovora</i> - Pear cv. Mishirazu	13319	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>
13248	<i>Erwinia amylovora</i> - Pear cv. Mishirazu	13320	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>
13249	<i>Erwinia amylovora</i> - Pear cv. Mishirazu	13321	<i>Gibberella zeae</i> - <i>Cucurbita maxima</i>
13250	<i>Erwinia amylovora</i> - Pear cv. Mishirazu	13322	<i>Fusarium oxysporum</i> - <i>Cucurbita maxima</i>
13251	<i>Erwinia amylovora</i> - Pear cv. Mishirazu	13323	<i>Fusarium oxysporum</i> - <i>Cucurbita maxima</i>
13252	<i>Erwinia amylovora</i> - Pear cv. Chinese Pear	13324	<i>Fusarium semitectum</i> - <i>Cucurbita maxima</i>
13253	<i>Erwinia amylovora</i> - Pear cv. Chinese Pear	13325	<i>Gibberella pulicaris</i> - <i>Cucurbita maxima</i>
13254	<i>Erwinia amylovora</i> - Pear cv. Brandywine	13326	<i>Gibberella pulicaris</i> - <i>Cucurbita maxima</i>
13255	<i>Nectria galligena</i> - <i>Malus X domestica</i>	13327	<i>Gibberella pulicaris</i> - <i>Cucurbita maxima</i>

13328	<i>Gibberella pulicaris</i> - <i>Cucurbita maxima</i>	13396	<i>Pseudomonas syringae</i> pv. <i>pisi</i> - <i>Pisum sativum</i>
13329	<i>Nectria haematococca</i> - <i>Cucurbita maxima</i>	13397	<i>Pseudomonas syringae</i> pv. <i>pisi</i> - <i>Pisum sativum</i>
13330	<i>Nectria haematococca</i> - <i>Cucurbita maxima</i>	13398	<i>Pseudomonas syringae</i> pv. <i>pisi</i> - <i>Pisum sativum</i>
13331	<i>Gliocladium</i> sp. - <i>Cucurbita maxima</i>	13400	<i>Pseudomonas savastanoi</i> pv. <i>savastanoi</i> - <i>Olea europaea</i>
13332	<i>Didymella bryoniae</i> - <i>Cucurbita maxima</i>	13401	<i>Xanthomonas</i> sp. - <i>Olea europaea</i>
13333	<i>Didymella bryoniae</i> - <i>Cucurbita maxima</i>	13402	<i>Xanthomonas</i> sp. - <i>Olea europaea</i>
13334	<i>Didymella bryoniae</i> - <i>Cucurbita maxima</i>	13403	<i>Xanthomonas</i> sp. - <i>Olea europaea</i>
13335	<i>Didymella bryoniae</i> - <i>Cucurbita maxima</i>	13404	<i>Acidovorax</i> sp. - <i>Anthurium</i> sp.
13336	<i>Phoma exigua</i> - <i>Cucurbita maxima</i>	13405	<i>Acidovorax</i> sp. - <i>Anthurium</i> sp.
13337	<i>Pleospora tarda</i> - <i>Cucurbita maxima</i>	13406	<i>Acidovorax</i> sp. - <i>Valerianella locusta</i>
13338	<i>Pleospora tarda</i> - <i>Cucurbita maxima</i>	13407	<i>Acidovorax</i> sp. - <i>Valerianella locusta</i>
13339	<i>Phoma exigua</i> - <i>Cucurbita maxima</i>	13408	<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i> - <i>Vigna radiata</i>
13340	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13409	<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i> - <i>Vigna radiata</i>
13341	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13410	<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i> - <i>Vigna radiata</i>
13342	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13411	<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i> - <i>Vigna radiata</i>
13343	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13412	<i>Erwinia amylovora</i> - <i>Malus X domestica</i>
13344	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13413	<i>Erwinia amylovora</i> - <i>Pyrus communis</i>
13345	<i>Mycosphaerella</i> sp. - <i>Malus X domestica</i>	13414	<i>Erwinia amylovora</i> - <i>Sorbus aria</i>
13346	<i>Aureobasidium pullulans</i> - <i>Malus X domestica</i>	13415	<i>Erwinia amylovora</i> - <i>Malus X domestica</i>
13347	<i>Botrytis</i> sp. - <i>Malus X domestica</i>	13416	<i>Erwinia amylovora</i> - <i>Cydonia oblonga</i>
13348	<i>Cladosporium</i> ? <i>herbarum</i> - <i>Malus X domestica</i>	13417	<i>Erwinia amylovora</i> - <i>Mespilus germanica</i>
13349	<i>Cladosporium</i> sp. - <i>Malus X domestica</i>	13418	<i>Pseudomonas viridiflava</i> - <i>Spinacia oleracea</i>
13350	<i>Cladosporium</i> sp. - <i>Malus X domestica</i>	13419	<i>Pseudomonas viridiflava</i> - <i>Citrus aurantium</i>
13351	<i>Cladosporium</i> sp. - <i>Malus X domestica</i>	13420	<i>Rhodococcus fascians</i> - <i>Petunia X hybrid</i>
13352	<i>Epicoccum</i> sp. - <i>Malus</i> sp.	13421	<i>Xanthomonas campestris</i> pv. <i>citri</i> (Group A) - <i>Citrus</i> ...
13353	<i>Fusarium</i> sp. - <i>Malus X domestica</i>	13422	<i>Xanthomonas</i> sp. - <i>Alnus subcordata</i>
13354	<i>Fusarium</i> sp. - <i>Malus X domestica</i>	13423	<i>Xanthomonas</i> sp. - <i>Catharanthus pusillus</i>
13355	<i>Fusarium</i> sp. - <i>Malus X domestica</i>	13424	<i>Xanthomonas</i> sp. - <i>Catharanthus pusillus</i>
13356	<i>Fusarium</i> sp. - <i>Malus X domestica</i>	13425	<i>Pseudomonas</i> sp.
13357	<i>Fusarium</i> sp. - <i>Malus X domestica</i>	13516	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Pyrus calleryana</i>
13358	<i>Fusarium</i> sp. - <i>Malus</i> sp.	13517	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Pyrus calleryana</i>
13359	<i>Mucor</i> sp. - <i>Malus X domestica</i>	13518	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Pyrus calleryana</i>
13360	<i>Penicillium</i> ? <i>expansum</i> - <i>Malus X domestica</i>	13519	<i>Pseudomonas savastanoi</i> pv. <i>savastanoi</i> - <i>Olea europaea</i>
13361	<i>Penicillium</i> ? <i>expansum</i> - <i>Malus X domestica</i>	13520	<i>Pseudomonas savastanoi</i> pv. <i>savastanoi</i> - <i>Olea europaea</i>
13362	<i>Penicillium</i> ? <i>expansum</i> - <i>Malus</i> sp.	13521	<i>Pseudomonas savastanoi</i> pv. <i>savastanoi</i> - <i>Olea europaea</i>
13363	<i>Pestalotia</i> sp. - <i>Malus</i> sp.	13525	<i>Xanthomonas campestris</i> pv. <i>zinniae</i> - <i>Zinnia elegans</i>
13364	? <i>Phoma</i> sp. - <i>Malus X domestica</i>	13526	<i>Agrobacterium</i> sp. - <i>Craspedia incana</i>
13365	<i>Phoma</i> sp. - <i>Malus X domestica</i>	13528	<i>Agrobacterium</i> sp. - Lagoon
13366	<i>Trichoderma</i> sp. - <i>Malus</i> sp.	13529	<i>Burkholderia</i> sp. - Lagoon sediment
13367	<i>Trichoderma</i> sp. - <i>Malus X domestica</i>	13530	<i>Pseudomonas</i> sp. - Stream
13368	Unidentified strain - <i>Malus X domestica</i>	13531	<i>Pseudomonas</i> sp. - Stream water
13369	<i>Botrytis cinerea</i>	13532	<i>Pseudomonas</i> sp. - Stream sediment
13370	<i>Botrytis cinerea</i>	13533	<i>Sphingomonas paucimobilis</i> - Soil
13371	<i>Botrytis cinerea</i>	13534	<i>Sphingomonas paucimobilis</i> - Lagoon water
13372	<i>Botrytis cinerea</i>	13535	<i>Sphingomonas paucimobilis</i> - Stream
13373	<i>Botrytis cinerea</i>	13536	Unidentified bacterium - Phenanthrene
13374	<i>Botrytis cinerea</i>	13537	<i>Xanthomonas campestris</i> pv. <i>parthenii</i>
13375	<i>Botrytis cinerea</i>	13539	<i>Pseudomonas flavescens</i> - <i>Juglans regia</i>
13376	<i>Botrytis cinerea</i>	13540	<i>Pseudomonas mendocina</i> - Soil enrichment with ethanol
13377	<i>Aphanomyces euteiches</i> - <i>Pisum sativum</i>	13541	<i>Pseudomonas resinovorans</i>
13378	<i>Aphanomyces euteiches</i> - <i>Phaseolus vulgaris</i>	13542	<i>Xanthomonas campestris</i> pv. <i>parthenii</i>
13379	<i>Aphanomyces euteiches</i> - <i>Vicia faba</i>	13543	<i>Xanthomonas campestris</i> pv. <i>parthenii</i>
13380	<i>Colletotrichum acutatum</i> - <i>Persea americana</i>	13544	<i>Xanthomonas campestris</i> pv. <i>parthenii</i>
13381	<i>Pirotaea falcata</i> - <i>Olearia semidentata</i>	13545	<i>Pseudomonas savastanoi</i> - <i>Olea europaea</i>
13382	<i>Pirotaea manihapua</i> - <i>Phormium tenax</i>	13546	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13383	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>	13547	<i>Erwinia amylovora</i> - <i>Photinia</i> sp.
13384	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>	13548	<i>Erwinia amylovora</i> - <i>Photinia</i> sp.
13385	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>	13549	<i>Erwinia amylovora</i> - <i>Cotoneaster</i> sp.
13386	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>	13550	<i>Erwinia</i> sp. - <i>Petroselinum crispum</i>
13387	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>	13551	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>
13388	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>	13552	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>
13389	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Prunus armeniaca</i>	13553	<i>Pirotaea palmicola</i> - <i>Rhopalostylis sapida</i>
13390	<i>Erwinia salicis</i> - <i>Salix</i> sp.	13554	<i>Leptosphaeria maculans</i> - <i>Brassica rapa</i>
13391	<i>Erwinia salicis</i> - <i>Salix</i> sp.	13555	<i>Rhizopus stolonifer</i> - <i>Cucurbita pepo</i> var. <i>melopepo</i>
13392	<i>Erwinia salicis</i> - <i>Salix</i> sp.	13556	<i>Phomopsis</i> sp. - <i>Malus X domestica</i>
13393	<i>Erwinia salicis</i> - <i>Salix</i> sp.	13557	<i>Alternaria alternata</i> - <i>Malus</i> sp.
13394	<i>Pseudomonas syringae</i> pv. <i>pisi</i> - <i>Pisum sativum</i>	13558	<i>Penicillium</i> sp. - <i>Ptychosperma</i> sp.
13395	<i>Pseudomonas syringae</i> pv. <i>pisi</i> - <i>Pisum sativum</i>	13559	<i>Penicillium</i> sp. - <i>Ptychosperma</i> sp.

13560	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13638	<i>Bradyrhizobium elkani</i> - <i>Glycine max</i>
13561	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13639	<i>Bradyrhizobium liaoningense</i>
13562	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13640	<i>Mesorhizobium plurifarum</i>
13563	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13641	<i>Mesorhizobium ciceri</i>
13564	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13642	<i>Rhizobium etli</i>
13565	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13643	<i>Rhizobium galegae</i>
13566	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13644	<i>Mesorhizobium mediterraneum</i>
13567	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13645	<i>Rhizobium tianshanense</i>
13568	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13646	<i>Rhizobium tropici</i>
13569	<i>Botrytis cinerea</i> - <i>Prunus persica</i>	13647	<i>Sinorhizobium fredii</i> - <i>Glycine max</i>
13570	<i>Alternaria argyranthemii</i> - <i>Argyranthemum frutescens</i>	13648	<i>Sinorhizobium saheli</i>
13571	<i>Alternaria anagallidis</i> - <i>Anagallis arvensis</i>	13649	<i>Sinorhizobium terangae</i>
13572	<i>Pleospora herbarum</i> - <i>Ulex europaeus</i>	13650	<i>Pseudomonas syringae</i> pv. <i>broussonetiae</i> - <i>Broussonetia</i> ...
13573	<i>Pyronema domesticum</i> - Burnt soil	13651	<i>Cochliobolus sativus</i> - <i>Triticale</i> sp.
13574	<i>Pezizula alba</i> - <i>Actinidia chinensis</i>	13652	<i>Setosphaeria rostrata</i> - <i>Phylaris</i> sp.
13575	<i>Ceratocystis fimbriata</i> - <i>Ipomoea batatas</i>	13653	<i>Setosphaeria rostrata</i> - <i>Setaria glauca</i>
13576	<i>Botryosphaeria dothidea</i> - <i>Malus X domestica</i>	13654	<i>Cercospora canescens</i> - <i>Phaseolus vulgaris</i>
13577	<i>Botryosphaeria obtusa</i> - <i>Malus X domestica</i>	13655	<i>Cercospora canescens</i> - <i>Vigna mungo</i>
13579	<i>Stemphylium lancipes</i> - <i>Aquilegia</i> sp.	13656	<i>Cercospora canescens</i> - <i>Vigna mungo</i>
13580	<i>Schizophyllum commune</i>	13657	<i>Cercospora canescens</i> - <i>Gossypium</i> sp.
13581	<i>Schizophyllum commune</i>	13658	<i>Cercospora canescens</i> - <i>Vigna radiata</i>
13582	<i>Setosphaeria rostrata</i> - <i>Triticum aestivum</i>	13659	<i>Ciborinia camelliae</i> - <i>Camellia japonica</i>
13583	<i>Cochliobolus sativus</i> - <i>Triticum aestivum</i>	13660	<i>Setosphaeria rostrata</i> - <i>Arecaceae</i>
13584	<i>Cochliobolus sativus</i> - <i>Triticum aestivum</i>	13661	<i>Alternaria zinniae</i> - <i>Zinnia elegans</i>
13585	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>	13662	<i>Phoma violicola</i> - <i>Viola X Wittrockiana</i>
13586	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>	13663	<i>Phoma clematidina</i> - <i>Clematis vitalba</i>
13587	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>	13664	<i>Phoma clematidina</i> - <i>Clematis ligusticifolia</i>
13588	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>	13665	<i>Alternaria calendulae</i> - <i>Calendula officinalis</i>
13589	<i>Rhizobium huautlense</i> - <i>Sesbania herbacea</i>	13666	<i>Phoma chrysanthimicola</i> - <i>Eutrema wasabi</i>
13591	<i>Pseudomonas syringae</i> pv. <i>syringae</i> - <i>Morus</i> sp.	13667	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13592	<i>Mycobacterium</i> sp. - Stream	13668	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13593	<i>Mycobacterium</i> sp.	13669	<i>Phoma wasabiae</i> - <i>Eutrema wasabi</i>
13594	<i>Pseudomonas fluorescens</i>	13670	<i>Botrytis cinerea</i>
13595	<i>Pseudomonas stutzeri</i>	13671	<i>Botrytis cinerea</i>
13596	<i>Pseudomonas</i> sp.	13672	<i>Botrytis cinerea</i>
13597	<i>Pseudomonas putida</i>	13673	<i>Botrytis cinerea</i>
13598	<i>Sphingomonas paucimobilis</i>	13674	<i>Botrytis cinerea</i>
13599	<i>Sphingomonas</i> sp.	13675	<i>Ileodictyon cibarium</i> - Mulch
13600	<i>Pseudomonas</i> sp. - Jet fuel (JP8)	13676	<i>Ileodictyon cibarium</i> - Mulch
13601	Unidentified bacterium	13677	<i>Phytophthora erythroseptica</i> - <i>Solanum tuberosum</i>
13602	<i>Sphingomonas</i> sp.	13678	<i>Phytophthora nicotianae</i> - <i>Phebalium squameum</i>
13603	Unidentified bacterium	13679	<i>Phytophthora cactorum</i> - <i>Vitex lucens</i>
13604	Unidentified bacterium - Jet fuel (JP8)	13680	<i>Phytophthora citricola</i> - <i>Vitis</i> sp.
13609	<i>Pseudomonas syringae</i> - <i>Beta vulgaris</i>	13681	<i>Phytophthora nicotianae</i> var. <i>parasitica</i> - <i>Anthurium</i> sp.
13610	<i>Pseudomonas aureofaciens</i> - Maas River clay in kerosene	13682	<i>Pyronema domesticum</i> - Cotton gauze
13611	<i>Pseudomonas aureofaciens</i> - Soil	13683	<i>Diaporthe actinidiae</i> - <i>Actinidia deliciosa</i>
13612	<i>Pseudomonas aureofaciens</i> - Lake water	13684	<i>Pseudomonas syringae</i> pv. <i>broussonetiae</i> - <i>Broussonetia</i> ..
13613	<i>Pseudomonas chlororaphis</i> - Plate contaminant	13685	<i>Pseudomonas syringae</i> pv. <i>broussonetiae</i> - <i>Broussonetia</i> ..
13614	<i>Pseudomonas chlororaphis</i> - Soil	13686	<i>Clavibacter</i> sp. - <i>Euphorbia pulcherrima</i>
13615	<i>Pseudomonas chlororaphis</i> - Soil	13688	<i>Rhizobium mongolense</i> - <i>Medicago ruthenica</i>
13616	<i>Pseudomonas fluorescens</i>	13689	<i>Rhizobium leguminosarum</i> biovar <i>viciae</i> - <i>Pisum sativum</i>
13617	<i>Pseudomonas fluorescens</i>	13690	<i>Rhizobium hainanense</i>
13618	<i>Pseudomonas fluorescens</i>	13692	<i>Burkholderia solanacearum</i> - <i>Lycopersicon esculentum</i>
13619	<i>Pseudomonas fluorescens</i>	13693	<i>Burkholderia solanacearum</i> - <i>Lycopersicon esculentum</i>
13620	<i>Pseudomonas fluorescens</i> - Hydrocarbon enrichment	13694	<i>Burkholderia solanacearum</i> - <i>Solanum tuberosum</i>
13621	<i>Pseudomonas fluorescens</i> - Soil	13695	<i>Burkholderia gladioli</i> - <i>Dendrobium</i> sp.
13622	<i>Pseudomonas fluorescens</i>	13696	<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> -
13623	<i>Pseudomonas fluorescens</i>	13697	<i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i> - ...
13624	<i>Pseudomonas fluorescens</i>	13698	<i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i> - ...
13625	<i>Pseudomonas fluorescens</i>	13699	<i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i> - ...
13626	<i>Pseudomonas fluorescens</i> - Well water	13700	<i>Erwinia carotovora</i> subsp. <i>carotovora</i> - <i>Zantedeschia</i> .
13627	<i>Pseudomonas fluorescens</i> - <i>Dahlia</i> sp.	13701	<i>Erwinia psidii</i> - <i>Psidium guajava</i>
13628	<i>Pseudomonas fluorescens</i> - Lake water	13702	<i>Xanthomonas campestris</i> pv. <i>viticola</i> - <i>Vitis vinifera</i>
13629	<i>Pseudomonas putida</i>	13703	<i>Xanthomonas campestris</i> pv. <i>viticola</i> - <i>Vitis vinifera</i>
13630	<i>Pseudomonas putida</i> - Soil	13704	<i>Xanthomonas campestris</i> pv. <i>viticola</i> - <i>Vitis vinifera</i>
13631	<i>Pseudomonas putida</i> - Soil	13705	<i>Xanthomonas campestris</i> pv. <i>viticola</i> - <i>Vitis vinifera</i>
13632	<i>Pseudomonas putida</i> - Soil	13706	<i>Xanthomonas campestris</i> pv. <i>viticola</i> - <i>Vitis vinifera</i>
13633	<i>Pseudomonas putida</i> - Soil	13707	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus</i> sp.
13634	<i>Comamonas terrigena</i> - Hay infusion filtrate	13708	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus armeniaca</i>
13635	<i>Comamonas acidovorans</i>	13709	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus persica</i> var. ...
13636	<i>Hydrogenophaga palleroni</i>	13710	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus armeniaca</i>
13637	<i>Azorhizobium caulinodans</i>	13711	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus armeniaca</i>

13712	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus armeniaca</i>	13741	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.
13713	<i>Xanthomonas campestris</i> pv. <i>pruni</i> - <i>Prunus armeniaca</i>	13742	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.
13714	<i>Streptomyces scabiei</i> - <i>Solanum tuberosum</i>	13743	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.
13715	<i>Streptomyces reticulatiscabiei</i> - <i>Solanum tuberosum</i>	13744	<i>Alternaria argyranthemii</i> - <i>Chrysanthemum segetum</i>
13716	<i>Streptomyces tellatiscabiei</i> - <i>Solanum tuberosum</i>	13745	<i>Alternaria sonchi</i> - <i>Sonchus oleraceus</i>
13717	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13747	<i>Verticillium nigrescens</i> - <i>Eschscholzia californica</i> .
13718	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13748	<i>Rhizopus oligosporus</i>
13719	<i>Coccomyces crystalligerus</i> - <i>Dicksonia antarctica</i>	13750	<i>Xanthomonas campestris</i> pv. <i>pruni</i>
13720	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13751	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13721	<i>Coccomyces radiatus</i> - <i>Nothofagus moorei</i>	13752	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13722	<i>Coccomyces radiatus</i> - Fallen leaves	13753	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
		13754	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13723	<i>Coccomyces tympanibaculi</i> - Fallen leaves	13755	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13724	<i>Coccomyces radiatus</i> - <i>Nothofagus moorei</i>	13756	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13725	<i>Coccomyces tympanibaculi</i> - <i>Schizomeria ovata</i>	13757	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13726	<i>Coccomyces limitatus</i> - Fallen leaves	13758	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13727	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13759	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13728	<i>Coccomyces lauraceus</i> - Lauraceae	13760	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13729	<i>Coccomyces walkeri</i> - <i>Sloanea australis</i>	13761	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13730	<i>Coccomyces radiatus</i> - <i>Nothofagus moorei</i> .	13762	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13731	<i>Coccomyces binnaburrensis</i> - Unidentified leaves	13763	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13732	<i>Coccomyces globosus</i> - Unidentified leaves	13764	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13733	<i>Coccomyces globosus</i> - <i>Lophostemon confertus</i>	13765	<i>Rhodococcus</i> sp. - Soil contaminated with oil JP8 jet fuel
13734	<i>Coccomyces binnaburrensis</i> - Fallen leaves	13766	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13735	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13768	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13736	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13769	<i>Pseudomonas savastanoi</i> - <i>Nerium oleander</i>
13737	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.	13771	<i>Pseudomonas savastanoi</i> - <i>Fraxinus</i> sp.
13738	<i>Coccomyces phyllocladi</i> - <i>Phyllocladus aspleniifolius</i>		
13739	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.		
13740	<i>Coccomyces globosus</i> - <i>Eucalyptus</i> sp.		