LIST OF NEW NAMES OF PLANT PATHOGENIC BACTERIA (2011-2012)
Prepared by the International Society of Plant Pathology Committee on the Taxonomy of Plant Pathogenic Bacteria (ISPP-CTPPB)


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SUMMARY

The International Society of Plant Pathology Committee on the Taxonomy of Plant Pathogenic Bacteria has responsibility to evaluate the names of newly proposed pathovars for adherence to the International Standards for Naming Pathovars of Phytopathogenic Bacteria. Currently, the Comprehensive List of Names and the List of New Names of Plant Pathogenic Bacteria provide the authoritative register of names of bacterial plant pathogens. In this manuscript we up-date the list of names by cataloguing and evaluating names of plant pathogenic bacteria published in 2011 and 2012. We provide those names that have been validly and effectively published in this time frame, the proposed names that we judged to be invalid, and names published earlier that did not make the previous lists.

INTRODUCTION

The International Society of Plant Pathology Committee on the Taxonomy of Plant Pathogenic Bacteria (ISPP-CTPPB) is charged with creating and interpreting the rules for naming of plant pathogenic bacteria at taxonomic levels below subspecies (Bull et al., 2008). The ISPP-CTPPB evaluates the names of newly proposed pathovars for adherence to the latest version of the International Standards for Naming Pathovars of Phytopathogenic Bacteria (Young et al., 2001; http://www.isppweb.org/about_tppb_naming.asp; “the Standards”). The establishment of the pathovar concept and the Standards for naming pathovars were largely advanced by John Young (Box 1). The ISPP-CTPPB also reviews lists of bacterial names conforming to the International Code of Nomenclature of Bacteria to search for new names or new combinations and emended taxa associated to plant pathogenic bacteria. It publishes its findings as a Comprehensive List of Names of Plant Pathogenic Bacteria (Bull et al., 2010) every ten years and up-dates to the list (List of New Names of Plant Pathogenic Bacteria) every two years. The last up-date was published in 2012 and covered names published from 2008 to 2010 (Bull et al., 2012). This manuscript lists names of plant pathogenic bacteria published in 2011 and 2012 or names that were not previously catalogued by ISPP-CTPPB.

Whereas in 1978, plant pathologists had assigned plant pathogenic bacteria to only nine genera [Agrobacterium, Corynebacterium, Erwinia, Nocardia, Pseudomonas, Serratia, Spiroplasma, Streptomyces, Xanthomonas: Young et al. (1978)], there are now 39 genera to which plant pathogenic bacteria belong (Bull et al., 2010, 2012, unpublished). This is due in part to advances made in DNA technology and classification methods. These methods have been used to
demonstrate that some taxa are polyphyletic and should be separated. In some cases comprehensive data have been presented, thus allowing the proposal of new named taxa. Pathogens from novel genera have also been discovered. In this and other recent lists of names, bacterial plant pathogens are assigned to several new genera for which plant pathologists have little experience. Economically important diseases are now known to be caused by pathogens in the genera Gibbsiella, Leifsonia, Lonsdalea, and Tatamella. The well-trained plant pathologist must therefore keep an open mind regarding which prokaryotes can cause plant disease and continue to rigorously demonstrate Koch’s postulates for novel taxa of suspected pathogens.

As of this writing, Pectobacterium carotovorum subsp. brasiliense Nabhan et al., 2012 subsp. nov. is effectively published but has not been validly published in the International Journal for Systematic and Environmental Microbiology (IJSEM). Previously, the name was casually mentioned in a publication by Duarte et al. (2004), which warranted us listing Pectobacterium carotovorum subsp. brasiliensis and Erwinia carotovorum subsp. brasiliensis Duarte et al., 2004 as invalid in earlier Lists. Similarly, the casual use of Dickeya solani is prevalent in the literature and regulatory documents, and on the internet. Recently a manuscript formally describing and naming the species Dickeya solani was accepted for publication and is in press in the IJSEM (van der Wolf et al., 2013). Readers should monitor IJSEM and the List of Prokaryotic Names with standing in Nomenclature (www.bacterio.net) to determine if these names have been validly published.

To ensure valid publication and recognition of authority for proposed pathovar names, the ISPP-CTPPB recommends that authors choose to publish in journals that adhere to the Standards. These journals encourage authors to adhere to the Standards and provide unambiguous naming of the pathovar, an adequate description of the new pathovar (including the designation of pathotype strains), and other required criteria (Young et al., 2001). In recent lists of names many pathovar names were ruled invalid because the proposals did not follow the Standards (Bull et al., 2012). Many of these invalid names were originally “mentioned” but not formally proposed in peer-reviewed journals. Thus, the nomenclature of these taxa remains ambiguous, as formal nomenclatural proposals have not been made yet. To avoid further confusion in the nomenclature of plant pathogenic bacteria, we encourage authors to select appropriate journals for publication of new species or classifications that require pathovar name changes like new description and union, division or transfer of established pathovars. We urge that authors adhere to the Standards even if it means selecting another reputable journal for publication. Meanwhile the ISPP-CTPPB is seeking solutions to solve this issue.

Regardless of where they are published, the mission of the ISPP-CTPPB is to catalogue new names. Thus, we request that authors send an electronic copy of the effective and validating publications of newly proposed names to the ISPP-CTPPB convener by email (Carollee.Bull@ars.usda.gov). Please contact the convener of the ISPP-CTPPB if you have any questions or comments about this list or other aspects of bacterial taxonomy.

**Abbreviations of Culture Collections**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ATCC</td>
<td>American Type Culture Collection, 3020 T享受, Manassas, Virginia 20110, USA.</td>
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<tr>
<td>BD</td>
<td>Plant Pathogenic and Plant Protecting Bacteria Collection (PPPB), ARC-Plant Protection Research Institute, 1134 Park Street, Hatfield, Pretoria, South Africa.</td>
</tr>
<tr>
<td>CECT</td>
<td>Colección Española de Cultivos Tipo, Universidad de Valencia, Edificio de investigación, 64100 Burjassot, Valencia, Spain.</td>
</tr>
<tr>
<td>CFBP</td>
<td>CIRM-CFBP, Collection Française de Bactéries Associées aux Plantes, UMR1345 IRHS, INRA, 49000 Angers, France.</td>
</tr>
<tr>
<td>DSMZ</td>
<td>Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Mascheroder Weg 1b, 38124 Braunschweig, Germany.</td>
</tr>
<tr>
<td>LMG</td>
<td>BCCM/LMG Bacteria Collection, Laboratory for Microbiology, Ghent University, K. L. Ledeganckstraat 35, 9000 Gent, Belgium.</td>
</tr>
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**BACTERIAL NAMES**

**Brenneria goodwinii** Denman et al., 2012 sp. nov.

LMG 26270; NCPPB 4484

**Dickeya dadantii** Samson et al., 2005 emend. Brady et al., 2012

CFBP 1269; ICMP 1544; NCPPB 898

**Dickeya dadantii subsp. dadantii** (Samson et al., 2005)

Brady et al., 2012 subsp. nov.

= **Dickeya dadantii** Samson et al., 2005

CFBP 1269; ICMP 1544; NCPPB 898

**Dickeya dadantii subsp. dieffenbachiae** (ex McFadden, 1961) Brady et al., 2012 comb. nov.

= **Dickeya dieffenbachiae** Samson et al., 2005

**Pectobacterium chrysanthemi** pv. **dieffenbachiae** (McFadden, 1961)

Young et al., 2004

= **Erwinia chrysanthemi** pv. **dieffenbachiae** (McFadden, 1961) Dye, 1978
Erwinia piriflorinigrans López et al., 2011 sp. nov.
LMG 5888; CECT 7348
Erwinia uzenensis Matsuura et al., 2012 sp. nov.
LMG 25843; NCPPB 4475
Enterobacter mori Zhu et al., 2011 sp. nov.
DSMZ 26271; LMG 25706
Lonsdalea Brady et al., 2012 gen. nov.

*Lonsdalea quercina* (Hildebrand and Schroth, 1967) Brady et al., 2012 comb. nov.
= *Brenneria quercina* (Hildebrand and Schroth, 1967) Hauben et al., 1999
= *Erwinia quercina* Hildebrand and Schroth, 1967
atCC 29281; CFBP 3617; DSMZ 4561; ICMP 1845;
LMG 2724; NCPPB 1852

*Lonsdalea quercina* subsp. *quercina* (Hildebrand and Schroth, 1967) Brady et al., 2012 subsp. nov.
= *Brenneria quercina* (Hildebrand and Schroth, 1967) Hauben et al., 1999
= *Erwinia quercina* Hildebrand and Schroth, 1967
atCC 29281; CFBP 3617; DSMZ 4561; ICMP 1845;
LMG 2724; NCPPB 1852

*Lonsdalea quercina* subsp. *iberica* Brady et al., 2012 subsp. nov.
LMG 26264; NCPPB 4490

*Lonsdalea quercina* subsp. *britannica* Brady et al., 2012 subsp. nov.
LMG 26267; NCPPB 4481

*Pantoea allii* Brady et al., 2011 sp. nov.
BD 390; LMG 24248

*Rhizobium nepotum* Pulawska et al., 2012b sp. nov.
CFBP 7436; LMG 26435
The type strain is not pathogenic

*Rhizobium skierniewicense* Pulawska et al., 2012c sp. nov.
CFBP 7420; LMG 26191

*Candidatus* Plant Pathogenic Bacteria

*Candidatus Phytoplasma costaricanum*’ Lee et al., 2011

*Candidatus Phytoplasma rubi*’ Malembic-Maher et al., 2011

*Candidatus Phytoplasma sudamericanum*’ Davis et al., 2012

*Candidatus Phytoplasma convolvuli*’ Martini et al., 2012

REFERENCES


