

LETTER TO THE EDITOR

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 *Tatumella*. 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. *brasiliense* 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 (Carolee.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

- ATCC** American Type Culture Collection, Manassas, Box 1549, Virginia 20108, USA.
- BD** Plant Pathogenic and Plant Protecting Bacteria Collection (PPPPB), ARC-Plant Protection Research Institute, 1134 Park Street, Hatfield, Pretoria, South Africa.
- CECT** Colección Española de Cultivos Tipo, Universidad de Valencia, Edificio de investigación, 64100 Burjassot, Valencia, Spain.
- CFBP** CIRM-CFBP, Collection Française de Bactéries Associées aux Plantes, UMR1345 IRHS, INRA, 49000 Angers, France.
- DSMZ** Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Mascheroder Weg 1b, 38124 Braunschweig, Germany
- ICMP** International Collection of Micro-organisms from Plants, Landcare Research, Private Bag 92170, Auckland, New Zealand
- LMG** BCCM/LMG Bacteria Collection, Laboratory for Microbiology, Ghent University, K. L. Ledeganckstraat 35, 9000 Gent, Belgium
- NCPPB** National Collection of Plant Pathogenic Bacteria, Food and Environment Research Agency, Department for Environment, Food and Rural Affairs, Sand Hutton, York, YO41 1LZ, England

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 dieffenbachiae* McFadden, 1961
CFBP 1246; CFBP 2051; DSMZ 18013; ICMP 1568;
LMG 25992; NCPPB 2976

Erwinia piriflorinigrans López *et al.*, 2011 sp. nov.
CFBP 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

John MacBean Young
January 9, 1942 – September 30, 2013

The International Society of Plant Pathology's Committee on Taxonomy of Plant Pathogenic Bacteria (ISPP-CTPPB) was saddened by the recent death of our colleague and friend John Young. The details of his productive research career, many accomplishments, and interests are outlined on the ISPP-CTPPB website (http://www.isppweb.org/nl_attachments/John_Young_Obituary2.pdf). John led the ISPP-CTPPB from 1983 to 2008. He was the driving force behind the work of the committee for much of the committee's existence. In particular, he initiated and maintained the catalogues listing the names of plant pathogenic bacteria (Young *et al.*, 1978, 1991, 1996, 2004). This publication and other lists of names of plant pathogenic bacteria continue his legacy.

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