

## Espécies descritas

### Espécie

### Referências

*Azorhizobium doebereinae*

MOREIRA (F.M.S.), CRUZ (L.), FARIA (S.M.), MARSH (T.), MARTÍNEZ-ROMERO (E.), PEDROSA (F.O.), PITARD (R.M.) and YOUNG (J.P.W.): *Azorhizobium doebereinae* sp. Nov. Microsymbiont of *Sesbania virgata* (Caz.) Pers. Syst. Appl. Microbiol., 2006, 29, 197-206.

*Azorhizophilus paspali* (*Azotobacter paspali*)

THOMPSON (J.P.) and SKERMAN (V.B.D.): Azotobacteraceae: the taxonomy and ecology of the aerobic nitrogen-fixing bacteria. Academic Press, London, 1980, 405 pp.

*Azospirillum brasilense*

TARRAND (J.J.), KRIEG (N.R.) and DÖBEREINER (J.): A taxonomic study of the *Spirillum lipoferum* group, with descriptions of a new genus, *Azospirillum* gen. nov. and two species, *Azospirillum lipoferum* (Beijerinck) comb. nov. and *Azospirillum brasilense* sp. nov. Canadian Journal of Microbiology, 1978, 24, 967-980.

*Azospirillum lipoferum*

TARRAND (J.J.), KRIEG (N.R.) and DÖBEREINER (J.): A taxonomic study of the *Spirillum lipoferum* group, with descriptions of a new genus, *Azospirillum* gen. nov. and two species, *Azospirillum lipoferum* (Beijerinck) comb. nov. and *Azospirillum brasilense* sp. nov. Canadian Journal of Microbiology, 1978, 24, 967-980.

*Bradyrhizobium ingae*

DA SILVA, K., DE MEYER, S. E., ROUWS, L. F. M., FARIAS, E. N. C., DOS SANTOS, M. A. O., O'HARA, G., ARDLEY, J. K., WILLEMS, A., PITARD, R. M. and ZILLI, J. E. 2014. *Bradyrhizobium ingae* sp. nov., isolated from effective nodules of *Inga laurina* grown in Cerrado soil. International journal of systematic and evolutionary microbiology, 64, 3395-3401.

*Bradyrhizobium neotropale*

ZILLI, J. E., BARAÚNA, A. C., DA SILVA, K., DE MEYER, S. E., FARIAS, E. N. C., KAMINSKI, P. E., DA COSTA, I. B., ARDLEY, J. K., WILLEMS, A., CAMACHO, N. N., DOURADO, F. D. S. and O'HARA, G. 2014. *Bradyrhizobium neotropale* sp. nov., isolated from effective nodules of *Centrolobium paraense*. Int. J. Syst. Evol. Microbiol., 64, 3950-3957.

*Bradyrhizobium stylosanthis*

Delamuta, J. R. M., Ribeiro, R. A., Araújo, J. L. S., Rouws, L. F. M., Zilli, J. É., Parma, M. M., Melo, I. S. and Hungria, M. (2016). *Bradyrhizobium stylosanthis* sp. nov., comprising nitrogen-fixing symbionts isolated from nodules of the tropical forage legume *Stylosanthes* spp. International journal of systematic and evolutionary microbiology, 66(8), 3078-3087.

- Bradyrhizobium centrolobii* Micel, D. C., Passos, S. R., Araújo, J. L. S., Barauna, A. C., Silva, K., Parma, M. M., Melo, I. S., De Meyer, S. E., O'Hara, G. and Zilli, J. E. (2017). *Bradyrhizobium centrolobii* and *Bradyrhizobium macuxiense* sp. nov. isolated from *Centrolobium paraense* grown in soil of Amazonia, Brazil. Archives of Microbiology, DOI 10.1007/s00203-017-1340-y.
- Bradyrhizobium macuxiense* Micel, D. C., Passos, S. R., Araújo, J. L. S., Barauna, A. C., Silva, K., Parma, M. M., Melo, I. S., De Meyer, S. E., O'Hara, G. and Zilli, J. E. (2017). *Bradyrhizobium centrolobii* and *Bradyrhizobium macuxiense* sp. nov. isolated from *Centrolobium paraense* grown in soil of Amazonia, Brazil. Archives of Microbiology, DOI 10.1007/s00203-017-1340-y.
- Gluconacetobacter diazotrophicus* YAMADA (Y.), HOSHINO (K.) and ISHIKAWA (T.): The phylogeny of acetic acid bacteria based on the partial sequences of 16S ribosomal RNA: the elevation of the subgenus *Gluconoacetobacter* to generic level. Biosci. Biotech. Biochem., 1997, 61, 1244-1251.
- Herbaspirillum frisingense* KIRCHHOF (G.), ECKERT (B.), STOFFELS (M.), BALDANI (J.I.), REIS (V.M.) and HARTMANN (A.): *Herbaspirillum frisingense* sp. nov., a new nitrogen-fixing bacterial species that occurs in C4-fibre plants. Int. J. Syst. Evol. Microbiol., 2001, 51, 157-168.
- Herbaspirillum rubrisubalbicans* BALDANI (J.I.), POT (B.), KIRCHHOF (G.), FALSEN (E.), BALDANI (V.L.D.), OLIVARES (F.L.), HOSTE (B.), KERSTERS (K.), HARTMANN (A.), GILLIS (M.) and DÖBEREINER (J.): Emended description of *Herbaspirillum*; inclusion of [*Pseudomonas*] *rubrisubalbicans*, a mild plant pathogen, as *Herbaspirillum rubrisubalbicans* comb. nov.; and classification of a group of clinical isolates (EF group 1) as *Herbaspirillum* species 3. Int. J. Syst. Bacteriol., 1996, 46, 802-810.
- Herbaspirillum seropedicae* BALDANI (J.I.), BALDANI (V.L.D.), SELDIN (L.) and DÖBEREINER (J.): Characterization of *Herbaspirillum seropedicae* gen. nov., sp. nov., a root-associated nitrogen-fixing bacterium. Int. J. Syst. Bacteriol., 1986, 36, 86-93.
- Microvirga vignae* RADL, V., SIMÕES-ARAÚJO, J. L., LEITE, J., PASSOS, S. R., MARTINS, L. M., XAVIER, G. R., RUMJANEK, N. G., BALDANI, J. I. and ZILLI, J. E. 2014. *Microvirga vignae* sp. nov., a root nodule symbiotic bacterium isolated from cowpea grown in semi-arid Brazil. Int. J. Syst. Evol. Microbiol., 64, 725-730.

*Nitrospirillum amazonense* (*Azospirillum amazonense*)

LIN, S.-Y., HAMEED, A., SHEN, F.-T., LIU, Y.-C., HSU, Y.-H., SHAHINA, M., LAI, W.-A. and YOUNG, C.-C. 2014. Description of *Niveispirillum fermenti* gen. nov., sp. nov., isolated from a fermentor in Taiwan, transfer of *Azospirillum irakense* (1989) as *Niveispirillum irakense* comb. nov., and reclassification of *Azospirillum amazonense* (1983) as *Nitrospirillum amazonense* gen. nov. *Antonie van Leeuwenhoek*, 105, 1149-1162

*Paraburkholderia sabiae* (*Burkholderia sabiae*)

CHEN (W.M.), DE FARIA (S.M.), CHOU (J.H.), JAMES (E.K.), ELLIOTT (G.N.), SPRENT (J.I.), BONTEMPS (C.), YOUNG (J.P.W.) and VANDAMME (P.): *Burkholderia sabiae* sp. nov., isolated from root nodules of *Mimosa caesalpinifolia*. *Int. J. Syst. Evol. Microbiol.*, 2008, 58, 2174-2179. Sawana, A., Adeolu, M. and Gupta, R.S. 2014. Molecular signatures and phylogenomic analysis of the genus *Burkholderia*: proposal for division of this genus into the emended genus *Burkholderia* containing pathogenic organisms and a new genus *Paraburkholderia* gen. nov. harboring environmental species. *Front. Genet.*, 5, 429.

*Paraburkholderia silvatlantica* (*Burkholderia silvatlantica*)

PERIN (L.), MARTÍNEZ-AGUILAR (L.), PAREDES-VALDEZ (G.), BALDANI (J.I.), ESTRADA-DE LOS SANTOS (P.), REIS (V.M.) and CABALLERO-MELLADO (J.): *Burkholderia silvatlantica* sp. nov., a diazotrophic bacterium associated with sugar cane and maize. *Int. J. Syst. Evol. Microbiol.*, 2006, 56, 1931-1937. Sawana, A., Adeolu, M. and Gupta, R.S. 2014. Molecular signatures and phylogenomic analysis of the genus *Burkholderia*: proposal for division of this genus into the emended genus *Burkholderia* containing pathogenic organisms and a new genus *Paraburkholderia* gen. nov. harboring environmental species. *Front. Genet.*, 5, 429.

*Paraburkholderia tropica* (*Burkholderia tropica*)

REIS (V.M.), ESTRADA-DE LOS SANTOS (P.), TENORIO-SALGADO (S.), VOGEL (J.), STOFFELS (M.), GUYON (S.), MAVINGUI (P.), BALDANI (V.L.D.), SCHMID (M.), BALDANI (J.I.), BALANDREAU (J.), HARTMANN (A.) and CABALLERO-MELLADO (J.): *Burkholderia tropica* sp. nov., a novel nitrogen-fixing, plant-associated bacterium. *Int. J. Syst. Evol. Microbiol.*, 2004, 54, 2155-2162. Sawana, A., Adeolu, M. and Gupta, R.S. 2014. Molecular signatures and phylogenomic analysis of the genus *Burkholderia*: proposal for division of this genus into the emended genus *Burkholderia* containing pathogenic organisms and a new genus *Paraburkholderia* gen. nov. harboring environmental species. *Front. Genet.*, 5, 429.

*Rhizobium tropici*

MARTÍNEZ-ROMERO (E.), SEGOVIA (L.), MERCANTE (F.M.), FRANCO (A.A.), GRAHAM (P.) and PARDO (M.A.): *Rhizobium tropici*, a novel species nodulating *Phaseolus vulgaris* L. beans and *Leucaena* sp. trees. Int. J. Syst. Bacteriol., 1991, 41, 417-426.

*Rhizobium altiplani*

Baraúna, A. C., Rouws, L. F., Simoes-Araujo, J. L., dos Reis Junior, F. B., Iannetta, P. P., Maluk, M.Goi. S. R, Reis, V. M., James, E. K. and Zilli, J. E. (2016). *Rhizobium altiplani* sp. nov., isolated from effective nodules on *Mimosa pudica* growing in untypically alkaline soil in central Brazil. International Journal of Systematic and Evolutionary Microbiology, 66(10), 4118-4124.