



***Pseudomonas protegens* sp. nov., widespread plant-protecting bacteria producing the biocontrol compounds 2,4-diacetylphloroglucinol and pyoluteorin**

Submitted by Emmanuel Lemoine on Thu, 02/12/2015 - 13:01

Titre	Pseudomonas protegens sp. nov., widespread plant-protecting bacteria producing the biocontrol compounds 2,4-diacetylphloroglucinol and pyoluteorin
Type de publication	Article de revue
Auteur	Ramette, Alban [1], Frapolli, Michele [2], Fischer-Le Saux, Marion [3], Gruffaz, C. [4], Meyer, Jean-Marie [5], Défago, Geneviève [6], Sutra, Laurent [7], Moënne-Loccoz, Yvan [8]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Langue	Anglais
Date	2011/05
Numéro	3
Pagination	180 - 188
Volume	34
Titre de la revue	Systematic and Applied Microbiology
ISSN	0723-2020
Mots-clés	2,4-Diacetylphloroglucinol [9], Biocontrol [10], Polyphasic taxonomy [11], <i>Pseudomonas protegens</i> sp. nov. [12], Pyoluteorin [13]
Résumé en anglais	<p>Fluorescent <i>Pseudomonas</i> strains producing the antimicrobial secondary metabolite 2,4-diacetylphloroglucinol (Phl) play a prominent role in the biocontrol of plant diseases. A subset of Phl-producing fluorescent <i>Pseudomonas</i> strains, which can additionally synthesize the antimicrobial compound pyoluteorin (Plt), appears to cluster separately from other fluorescent <i>Pseudomonas</i> spp. based on 16S rRNA gene analysis and shares at most 98.4% 16S rRNA gene sequence identity with any other <i>Pseudomonas</i> species. In this study, a polyphasic approach based on molecular and phenotypic methods was used to clarify the taxonomy of representative Phl+ Plt+ strains isolated from tobacco, cotton or wheat on different continents. Phl+ Plt+ strains clustered separately from their nearest phylogenetic neighbors (i.e. species from the '<i>P. syringae</i>', '<i>P. fluorescens</i>' and '<i>P. chlororaphis</i>' species complexes) based on <i>rpoB</i>, <i>rpoD</i> or <i>gyrB</i> phylogenies. DNA-DNA hybridization experiments clarified that Phl+ Plt+ strains formed a tight genomospecies that was distinct from <i>P. syringae</i>, <i>P. fluorescens</i>, or <i>P. chlororaphis</i> type strains. Within Phl+ strains, the Phl+ Plt+ strains were differentiated from other biocontrol fluorescent <i>Pseudomonas</i> strains that produced Phl but not Plt, based on phenotypic and molecular data. Discriminative phenotypic characters were also identified by numerical taxonomic analysis and siderotyping. Altogether, this polyphasic approach supported the conclusion that Phl+ Plt+ fluorescent <i>Pseudomonas</i> strains belonged to a novel species for which the name <i>Pseudomonas protegens</i> is proposed, with CHA0T (=CFBP 6595T, =DSM 19095T) as the type strain.</p>

URL de la notice	http://okina.univ-angers.fr/publications/ua7742 [14]
DOI	10.1016/j.syapm.2010.10.005 [15]
Lien vers le document	http://dx.doi.org/10.1016/j.syapm.2010.10.005 [15]

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- [15] <http://dx.doi.org/10.1016/j.syapm.2010.10.005>

Publié sur *Okina* (<http://okina.univ-angers.fr>)