



# Genomic and metabolic comparison with *Dickeya dadantii* 3937 reveals the emerging *Dickeya solani* potato pathogen to display distinctive metabolic activities and T5SS/T6SS-related toxin repertoire

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## ► To cite this version:

Jacques J. Pedron, Samuel Mondy, Yannick Raoul Des Essarts, Frederique F. van Gijsegem, Denis Faure. Genomic and metabolic comparison with *Dickeya dadantii* 3937 reveals the emerging *Dickeya solani* potato pathogen to display distinctive metabolic activities and T5SS/T6SS-related toxin repertoire. BMC Genomics, 2014, 15, 10.1186/1471-2164-15-283 . hal-02632855

**HAL Id: hal-02632855**

**<https://hal.inrae.fr/hal-02632855>**

Submitted on 27 May 2020

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| <i>D. solani</i> 3337 gene (ID) |                             | Identity (%) <sup>1</sup> | Cter motif identity (%) <sup>2</sup> |
|---------------------------------|-----------------------------|---------------------------|--------------------------------------|
| <i>hecA2</i> (0501)             | <i>D. dadantii</i> 3937     | 77                        | 29                                   |
|                                 | <i>D. chrysanthemi</i> 1591 | 66                        | 29                                   |
|                                 | <i>D. paradisiaca</i> 703   | 59                        |                                      |
|                                 | <i>D. zeae</i> 586          | 64                        |                                      |
| <i>cdi</i> (0409)               | <i>D. dadantii</i> 3937     | 73                        | 33                                   |
|                                 | <i>D. chrysanthemi</i> 1591 | 67                        | 32                                   |
|                                 | <i>D. paradisiaca</i> 703   | 49                        |                                      |
|                                 | <i>D. zeae</i> 586          | 62                        |                                      |
| <i>hcpA</i> (3404)              | <i>D. dadantii</i> 3937     | 99                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 98                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 97                        |                                      |
| <i>vgrGA</i> (3403)             | <i>D. dadantii</i> 3937     | 98                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 97                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 97                        |                                      |
| <i>rhsA</i> (3401)              | <i>D. dadantii</i> 3937     | 91                        | 100                                  |
|                                 | <i>D. chrysanthemi</i> 1591 | 93                        | 13                                   |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 90                        | 16                                   |
| <i>rhsIA</i> (3400)             | <i>D. dadantii</i> 3937     | 100                       |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | none                      |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | none                      |                                      |
| <i>hcpB</i> (4345)              | <i>D. dadantii</i> 3937     | 99                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 98                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 98                        |                                      |
| <i>vgrGB</i> (4346)             | <i>D. dadantii</i> 3937     | 88                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 88                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 89                        |                                      |
| <i>rhsB</i> (4348)              | <i>D. dadantii</i> 3937     | none*                     |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | none*                     |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | none*                     |                                      |
| <i>rhsIB</i> (4349)             | <i>D. dadantii</i> 3937     | none*                     |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | none*                     |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | none*                     |                                      |
| <i>hcpC</i> (3992)              | <i>D. dadantii</i> 3937     | 99                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 98                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 98                        |                                      |
| <i>vgrGC</i> (3993)             | <i>D. dadantii</i> 3937     | 91                        |                                      |
|                                 | <i>D. chrysanthemi</i> 1591 | 94                        |                                      |
|                                 | <i>D. paradisiaca</i> 703   | none                      |                                      |
|                                 | <i>D. zeae</i> 586          | 93                        |                                      |
| <i>rhsC</i> (4000)              | <i>D. dadantii</i> 3937     | 90                        | 24                                   |
|                                 | <i>D. chrysanthemi</i> 1591 | none*                     |                                      |

|                     |                             |       |    |
|---------------------|-----------------------------|-------|----|
|                     | <i>D. paradisiaca</i> 703   | none  |    |
|                     | <i>D. zea</i> 586           | 85    | 97 |
|                     |                             |       |    |
| <i>rhsIC</i> (4001) | <i>D. dadantii</i> 3937     | none* |    |
|                     | <i>D. chrysanthemi</i> 1591 | none* |    |
|                     | <i>D. paradisiaca</i> 703   | none  |    |
|                     | <i>D. zea</i> 586           | 95    |    |

<sup>1</sup> none: no homologous gene (threshold blastp evalue :  $10^{-5}$ ). \*: gene present but not homologous.

<sup>2</sup> for toxin encoding genes (*hecA2*, *cdi*, *rhsABC*). # / #: when variation is restricted to the Cter motif (Ct toxin domain), number of conserved amino acid in the Cter motif. When no value is indicated, the variation is not restricted to the Cter.