### Sensing and adhesion are adaptive functions in the plant pathogenic xanthomonads

Submitted by Emmanuel Lemoine on Thu, 02/12/2015 - 13:04

| Titre | Sensing and adhesion are adaptive functions in the plant pathogenic xanthomonads |
|-------|----------------------------------------------------------------------------------|
| Type de publication | Article de revue |
| Auteur | Mhedbi-Hajri, Nadia [1], Darrasse, Armelle [2], Pigné, Sandrine [3], Durand, Karine [4], Fouteau, Stéphanie [5], Barbe, Valérie [6], Manceau, Charles [7], Lemaire, Christophe [8], Jacques, Marie-Agnès [9] |
| Editeur | BioMed Central |
| Type | Article scientifique dans une revue à comité de lecture |
| Année | 2011 |
| Langue | Anglais |
| Date | 2011/03/11 |
| Numéro | 1 |
| Volume | 11 |
| Titre de la revue | BMC Evolutionary Biology |
| ISSN | 1471-2148 |

Bacterial plant pathogens belonging to the Xanthomonas genus are tightly adapted to their host plants and are not known to colonise other environments. The host range of each strain is usually restricted to a few host plant species. Bacterial strains responsible for the same type of symptoms on the same host range cluster in a pathovar. The phyllosphere is a highly stressful environment, but it provides a selective habitat and a source of substrates for these bacteria. Xanthomonads colonise host phylloplane before entering leaf tissues and engaging in an invasive pathogenic phase. Hence, these bacteria are likely to have evolved strategies to adapt to life in this environment. We hypothesised that determinants responsible for bacterial host adaptation are expressed starting from the establishment of chemotactic attraction and adhesion on host tissue.

---

**Résumé en anglais**

Bacterial plant pathogens belonging to the Xanthomonas genus are tightly adapted to their host plants and are not known to colonise other environments. The host range of each strain is usually restricted to a few host plant species. Bacterial strains responsible for the same type of symptoms on the same host range cluster in a pathovar. The phyllosphere is a highly stressful environment, but it provides a selective habitat and a source of substrates for these bacteria. Xanthomonads colonise host phylloplane before entering leaf tissues and engaging in an invasive pathogenic phase. Hence, these bacteria are likely to have evolved strategies to adapt to life in this environment. We hypothesised that determinants responsible for bacterial host adaptation are expressed starting from the establishment of chemotactic attraction and adhesion on host tissue.

**URL de la notice**

http://okina.univ-angers.fr/publications/ua7769 [10]

**DOI**

10.1186/1471-2148-11-67 [11]

**Lien vers le document**

http://dx.doi.org/10.1186/1471-2148-11-67 [11]

---

**Liens**

[1] http://okina.univ-angers.fr/publications?f[author]=12061
[2] http://okina.univ-angers.fr/a.darrasse/publications
[3] http://okina.univ-angers.fr/publications?f[author]=12062
[4] http://okina.univ-angers.fr/publications?f[author]=11808
[5] http://okina.univ-angers.fr/publications?f[author]=12063
[6] http://okina.univ-angers.fr/publications?f[author]=11664
Publié sur Okina (http://okina.univ-angers.fr)