Armelle Darrasse
57 years old
PhD in Phytopathology (Université Paris VI)
senior phytobacteriologist

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Research experiences

Since 2001 Engineer at INRAE (Angers, France). Ecology and epidemiology of seedborne plant pathogenic bacteria - Study of mechanisms involved in transmission to and by seed, adaptation to host and evolution - Comparative genomics - Transcriptomics - 38 publications -
1993 to June 2001 Engineer at INRA (Guadeloupe, French West Indies) - Biodiversity of phytopathogenic bacteria to support breeding programs for host plant resistance - Prospection and strains collection. Phenotyping and genotyping - Biotests and field experiments – 5 publications -
1989 to 1993 Master and PhD (Université P. et M. Curie, Paris, France). Research of sequences specific pectolytic bacteria -Genomic subtraction, sequencing, sequence analysis, development of PCR detection tools - 2 patents and 4 publications -

Expertise

Annotation of bacterial genomes and comparative genomics
Transcriptomics and site-directed mutagenesis of candidate genes
Study of bacterial colonization in planta and transmission to and by seeds
Characterization of pathogenicity
Molecular characterization of microbial diversity
Development of identification tools
Expertise on bacteria belonging to the genus *Xanthomonas*

Most significant publications

Chen, N. W. G., Ruh, M., Darrasse, A., Foucher, J., Briand, M., Costa, J., Studholme, D. J., and Jacques, M. A. (2021). Common bacterial blight of bean: a model of seed transmission and pathological convergence. *Mol Plant Pathol*.

Chesneau, G., Torres-Cortes, G., Briand, M., Darrasse, A., Preveaux, A., Marais, C., Jacques, M. A., Shade, A., and Barret, M. (2020). Temporal dynamics of bacterial communities during seed development and maturation. *FEMS Microbiol Ecol* 96.

Lacault, C., Briand, M., Jacques, M-J., and Darrasse, A. 2020. Zucchini vein clearing disease is caused by several lineages within *Pseudomonas syringae* species complex. *Phytopathology*. DOI: 10.1094/PHYTO-07-19-0266-R

Meline, V., W. Delage, C. Brin, C. Li-Marchetti, D. Sochard, M. Arlat, C. Rousseau, A. Darrasse, M. Briand, G. Lebreton, P. Portier, M. Fischer-Le Saux, K. Durand, M. A. Jacques, E. Belin and T. Boureau (2019). "Role of the acquisition of a type 3 secretion system in the emergence of novel pathogenic strains of *Xanthomonas*." *Mol Plant Pathol* **20**(1): 33-50.

Chen NWG, Serres-Giardi L, Ruh M, Briand M, et al. 2018. Horizontal gene transfer plays a major role in the pathological convergence of *Xanthomonas* lineages on common bean. *BMC Genomics* doi: 10.1186

Darrasse A, Barret M, Cesbron S, Compant S, Jacques M-A. 2017. Niches and routes of transmission of *Xanthomonas citri* pv. *fuscans* to bean seeds. *Plant and Soil* doi: 10.1007

Jacques MA, Arlat M, Boulanger A, Boureau T et al. 2016. Using ecology, physiology, and genomics to understand host specificity in *Xanthomonas*. *Annu Rev Phytopathol* 54:163-8

Terrasson E, Darrasse A, Righetti K, Buitink J et al. 2015. Identification of a molecular dialogue between

developing seeds of *Medicago truncatula* and seedborne xanthomonads. *J Exp Bot* 66:3737-52

Darrasse A, Carrere S, Barbe V, Boureau T, et al. 2013. Genome sequence of *Xanthomonas fuscans* subsp. *fuscans* strain 4834-R reveals that flagellar motility is not a general feature of xanthomonads. *BMC Genomics* 14:1471-2164

Mhedbi-hajri N, Hajri A, Boureau T, Darrasse A, et al. 2013. Evolutionary history of the plant pathogenic bacterium *Xanthomonas axonopodis*. *PLoS ONE* 8: e58474. doi: 10.1371

Mhedbi-Hajri N, Darrasse A, Pigné S, Durand K, et al. 2011. Sensing and adhesion are adaptive functions in the plant pathogenic xanthomonads. *BMC Evol Biol* 11:67

Darrasse A, Darsonval A, Boureau T, Brisset MN et al. 2010. Transmission of plant-pathogenic bacteria by nonhost seeds without induction of an associated defense reaction at emergence. *Appl Environ Microbiol* 76:6787-96

Darsonval A, Darrasse A, Meyer D, Demarty M, et al. 2008. The Type III secretion system of *Xanthomonas fuscans* subsp. *fuscans* is involved in the phyllosphere colonization process and in transmission to seeds of susceptible beans. *Appl Environ Microbiol* 74: 2669-78

Darrasse A, Bureau C, Samson R, Morris C, Jacques M-A. 2007. Contamination of bean seeds by *Xanthomonas axonopodis* pv. *phaseoli* associated with low bacterial densities in the phyllosphere under field and greenhouse conditions. *Eur J Plant Pathol* 119:203-15

Deberdt P, Queneherve P, Darrasse A, Prior P. 1999. Increased susceptibility to bacterial wilt in tomatoes by nematode galling and the role of the Mi gene in resistance to nematodes and bacterial wilt. *Plant Pathol* 48:408-14

Darrasse A, Kotoujansky A, Bertheau Y. 1994. Isolation by genomic subtraction of DNA probes specific for *Erwinia carotovora* subsp. *atroseptica*. *Appl Environ Microbiol* 60:298-306