

# Marie-Agnès JACQUES

## Curriculum vitae

Institute of Research in Horticulture and Seeds

INRAE

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### Appointments

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1998-present: Senior scientist at INRAE: Director of Research working at the IRHS Angers France.

Deputy Director of the IRHS (250 agents)

Director of the Federative Structure of Research in Plant Quality and Health (SFR 4207 Quasav)

Emersys group leader

**Ecology, evolution, mechanisms of host colonization, and emergence of bacterial plant pathogens** (*Xanthomonas* spp., *Xylella fastidiosa*, *Clavibacter michiganensis*)

1995-1998: Scientist, INRA, Plant Pathology Unit, Avignon, France

Epidemiology of ready-to-use leafy vegetables decay

1994-1995: Postdoctoral fellow, IVEM, Oxford UK

Genetic transfers among bacteria in heterogeneous biofilms in the phyllosphere

1990-1994: PhD student, INRA, Plant Pathology Unit, Avignon, France

Quantitative ecology and physiology of the epiphytic bacterial community

### Education

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Capacity to supervise researches (HDR) in Plant Pathology, 2010, Angers University, France

PhD: 1994 – Plant pathology, Sciences University, Paris XI, Orsay, France

MSc: 1990 – Plant pathology, Sciences University, Nantes, France

Engineer in Agronomy: 1989 ENSFA, Rennes, France

### Expertise

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- 30 years of research on plant pathogenic bacteria, teaching and training activities
- 25 research grants with public and private research organizations at national and EU levels
- 77 scientific publications in international peer-reviewed journals; 8 book chapters, >100 communications in national and international congresses, 19 invited talks in international congresses
- Senior Editor for Molecular Plant Pathology appointed from January 2015
- Member of the Plant Health Panel of the European Food Safety Authority (2018-)
- Member of various Working groups as an external expert to prepare scientific opinions on the categorization of quarantine plant pathogenic bacteria, on the risk posed by STEC in sprouts and seeds for EFSA and ANSES.
- Nominated member of the specialized scientific commission Biology-Health at IRD (2016-2020)
- Member of congress scientific committees (*Xylella* conferences 2017, 2019; ICPPB up to the 2014 edition, French plant bacteriologists-Aussois meetings)
- Reviewer for international peer-reviewed journals and grant proposals for various agencies
- Reviewer of 6 capacities to supervise research exam (HDR)
- Supervision of 11 PhD students, one engineer, graduate students and one technical assistant
- Member of 21 PhD thesis defenses (international and national) and member of 6 PhD student individual follow-up committees
- Member for the recruitment of 11 researchers
- Rapporteur for 21 candidates for competitive exams at IRD
- External member of 3 Doctoral school committees for PhD candidate selection
- In charge of the organization of the scientific seminars for INRA research center and federative structure (1998- present).

- Coordinator of the French Network on Xanthomonads gathering all French teams working on *Xanthomonas* and *Xylella* (<https://www.reseau-xantho.org/>)  
H index (WoS) : 25 (March 2020).

## Participations in expertise reports

- EFSA PLH Panel (EFSA Panel on Plant Health) publications in EFSA Journal since July 2018
- EFSA Panel on Plant Health, 2018. Scientific report on the update of the *Xylella* spp. host plant database. EFSA Journal 2018;16(9):5408, 87 pp. <https://doi.org/10.2903/j.efsa.2018.5408>
- EFSA Panel on Plant Health. 2016. Statement on diversity of *Xylella fastidiosa* subsp. *pauca* in Apulia. EFSA Journal 2016;14(7):4542, 2 pp. doi:10.2903/j.efsa.2016.4542.
- EFSA. 2016. Workshop on *Xylella fastidiosa*: knowledge gaps and research priorities for the EU. EFSA supporting publication 2016:EN-1039.74 pp.

## Selection of 15 scientific papers from 2016

- Lacault C, Briand M, Jacques M-A, Darrasse A. 2020. Zucchini vein clearing disease is caused by several lineages within *Pseudomonas syringae* species complex. Phytopathology (in press) [DOI:10.1094/PHYTO-07-19-0266-R](https://doi.org/10.1094/PHYTO-07-19-0266-R)
- Osdaghi E, Rahimi T, Taghavi S.M, Ansari M, Zarei S, Portier P, Briand M, Jacques M-A. 2020. Comparative genomics and phylogenetic analyses suggest several novel species within *Clavibacter* sp. including non-pathogenic tomato-associated strains. Appl Environ Microbiol 86:e02873-19. [DOI: 10.1128/aem.02873-19](https://doi.org/10.1128/aem.02873-19)
- Denancé N, Briand M, Gaborieau R, Gaillard S, Jacques M-A. 2019. Identification of genetic relationships and subspecies signatures in *Xylella fastidiosa*. BMC Genomics 20:239. [DOI: 10.1186/s12864-019-5565-9](https://doi.org/10.1186/s12864-019-5565-9)
- Dupas E, Briand M, Jacques M-A\*, Cesbron S\*. 2019. Novel tetraplex qPCR assays for simultaneous detection and identification of *Xylella fastidiosa* subspecies in plant tissues. Front Plant Sci 10:1732. [DOI: 10.3389/fpls.2019.01732](https://doi.org/10.3389/fpls.2019.01732)
- Chen N, Serres-Giardi L, Ruh M, Briand M, Bonneau S, Darrasse A, Barbe V, Gagnevin L, Koebnik R, Jacques M-A\*. 2018. Horizontal gene transfer plays a major role in the pathological convergence of *Xanthomonas* lineages on common bean BMC Genomics 19:606. [DOI:10.1186/s12864-018-4975-4](https://doi.org/10.1186/s12864-018-4975-4)
- Darrasse A, Barret M, Cesbron S, Compant S, Jacques M-A\*. 2018. Niches and routes of transmission of *Xanthomonas citri* pv. *fuscans* to bean seeds. Plant Soil 422:115-128. [DOI: 10.1007/s11104-017-3329-3](https://doi.org/10.1007/s11104-017-3329-3)
- Torres-Cortés G, Bonneau S, Bouchez O, Genthon C, Briand M, Jacques M-A, Barret M. 2018. Functional microbial features driving community assembly during seed germination and emergence. Front Plant Sci 9:902. [DOI: 10.3389/fpls.2018.00902](https://doi.org/10.3389/fpls.2018.00902)
- Merda D, Briand M, Bosis E, Rousseau C, Portier P, Barret M, Jacques M-A\*, Fischer-Le Saux M\*. 2017. Ancestral acquisitions, gene flow and multiple evolutionary trajectories of the type three secretion system and effectors in *Xanthomonas* plant pathogens. Molecular Ecology 26:5939-5952. [DOI: 10.1111/mec.14343](https://doi.org/10.1111/mec.14343)
- Shade A., Jacques M-A, Barret M. 2017. Ecological patterns of seed microbiome diversity, transmission, and assembly. Current Opinion in Microbiology 37:15–22. [DOI: 0.1016/j.mib.2017.03.010](https://doi.org/10.1016/j.mib.2017.03.010)
- Thapa SP, Pattathil S, Hahn MG, Jacques M-A, Gilbertson RL, Coaker G. 2017. Comparative genomic analysis of *Clavibacter michiganensis* reveals insight into virulence strategies of Gram-positive bacterial pathogens. Molecular Plant Pathology Interactions 30:786–802. [DOI: 10.1094/MPMI-06-17-0146-R](https://doi.org/10.1094/MPMI-06-17-0146-R)
- Jacques M-A\*, Arlat M, Boulanger A, Boureau T, Carrère S, Cesbron S, Chen NWG, Cociancich S, Darrasse A, Denancé N, Fischer-Le Saux M, Gagnevin L, Koebnik R, Lauber E, Noël LD, Pieretti I, Portier P, Pruvost O, Rieux A, Robène I, Royer M, Szurek B, Verdier V, Vernière C. 2016. Using Ecology, Physiology, and Genomics to Understand Host Specificity in *Xanthomonas*. Ann Rev Phytopathol 54: 163-187. [DOI: 10.1146/annurev-phyto-080615-100147](https://doi.org/10.1146/annurev-phyto-080615-100147)
- Jacques M-A\*, Denancé N, Legendre B, Morel E, Briand M, Mississippi S, Durand K, Olivier V, Portier P, Poliakoff F, Crouzillat D. 2016. New variants of coffee-infecting *Xylella fastidiosa* issued from homologous recombination. Applied and Environmental Microbiology 82:1556–1568. [DOI: 10.1128/AEM.03299-15](https://doi.org/10.1128/AEM.03299-15)
- Klaedtke S, Jacques M-A, Raggi L, Prévieux A, Bonneau S, Negri V, Chable V, Barret M. 2016. Terroir is a key driver of seed-associated microbial assemblages. Environmental Microbiology 18:1792-1804. [DOI: 10.1093/jxb/erv167](https://doi.org/10.1093/jxb/erv167)
- Merda D, Bonneau S, Guimbaud JF, Durand K, Brin C, Boureau T, Lemaire C, Jacques M-A\*, Fischer-LeSaux M\*. 2016. Recombination-prone bacterial strains form a reservoir from which epidemic clones emerge in agroecosystems. Environmental Microbiology Reports 8 : 572–581. [DOI: 10.1111/1758-2229.12397](https://doi.org/10.1111/1758-2229.12397)
- Barret M, Guimbaud JF, Darrasse A, Jacques M-A\*. 2016. Plant microbiota affects seed transmission of phytopathogenic micro-organisms. Mol Plant Pathol. 17: 791–795. [DOI: 10.1111/mpp.12382](https://doi.org/10.1111/mpp.12382)