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EMPLOYMENT

Current position since January 2005

Associate Professor at the school Agrocampus Ouest Angers,

<http://www.agrocampus-ouest.fr/infoglueDeliverLive/>

Department: Plant Sciences applied to Agriculture and Horticulture

Laboratory: JRU IRHS 'Research Institute on Horticulture and Seeds (INRA/AO/UA)'

<https://www6.angers-nantes.inra.fr/irhs>

Research team: QuaRVeg 'Quality and Resistance to pests and diseases in Vegetables'

Skills: plant resistance, quantitative genetics, plant pathology, plant breeding

RESEARCH INTEREST

Main research: Study of the genetic determinism of carrot resistance to *Alternaria dauci*
QTLs were identified in different genetic backgrounds, environments and with different scoring methods. Functional analysis of carrot resistance to *Alternaria dauci* is under progress in order to identify some mQTLs (metabolite QTLs) which are involved in carrot resistance to *A. dauci* and could explain the identified QTLs.

Other projects:

Multiresistance to pathogens (*Alternaria radicina* and *Xanthomonas hortorum* pv. *carotae*)

Developing new phenotyping methods to evaluate carrot resistance

Understanding the interaction between biotic and abiotic stresses; assessing the determinants involved in root quality and resistance to *A. dauci*

TEACHING AREAS

Horticulture

Vegetable and seed production and chain

Genetic resources

EDUCATION

2001, Ph. D in cellular and molecular plant biology, University of Angers, France

Title: "Evaluation of carrot genetic diversity (*Daucus carota* L.): strategies for analyses and regeneration of genetic resources "

✓Based on molecular markers, **new methodologies** were developed for the characterization, conservation and regeneration of carrot accessions of the "National collection of Carrot and others *Daucus*".

OTHER PROFESSIONAL EXPERIENCES

- August 14- Aug. 15 Visiting scholar- NCSU, Raleigh (NC, USA) in Plant Pathology Department, Peter Balint-Kurti lab. Maize resistance to *Cochliobolus heterostrophus* and *Belonolaimus longicaudatus*.
- April 01- July. 03 Scientist – ECPGR research project « The future of European carrot », INH, Angers
- August 03- Sept. 04 Research engineer – BioGEVES Laboratory, Surgères (France)
- Oct. 04- Dec. 04 Research engineer – GEVES, Brion (France)

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3. Briard M., **Le Clerc V.**, Grzebelus D., Senalik D., Simon P.W., **2000**. Modified protocols for rapid carrot genomic DNA extraction and AFLPtm analysis using silver stain or radioisotopes. Plant Molecular Biology Reporter, 18: 235-241.
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5. **Le Clerc V.**, Briard M., Granger J., Delettre J., **2003**. Genebank biodiversity assessments regarding optimal sample size and seed harvesting techniques for the regeneration of carrot accessions. Biodiversity and Conservation, 12: 2227-2236.
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7. **Le Clerc V.**, Bazante F, Baril C, Guiard J., Zhang D., **2005**. Assessing temporal changes in genetic diversity of maize varieties using microsatellite markers. Theoretical and Applied Genetics, 110: 294-302.
8. **Le Clerc V.**, Suel A., Briard M., **2005**. Identification of duplicates for the optimization of carrot collection management. Biodiversity and Conservation, 14: 1211-1223.
9. Zhang L., **Le Clerc V.**, Li S., Zhang D., **2005**. Establishment of an effective set of simple sequence repeat markers for sunflower variety identification and diversity assessment. Canadian Journal of Botany, 83 : 66-72.
10. **Le Clerc V.**, Cadot V., Canada M., Lallemand J., Guérin D., Boulineau F., **2006**. Indicators to assess temporal genetic diversity in the French Catalogue: no losses for maize and peas. Theoretical and Applied Genetics, 113: 1197-1209.
11. Boedo C., **Le Clerc V.**, Briard M., Simoneau P., Chevalier M., Georgeault S., Poupard P., **2008**. Impact of carrot resistance on development of the *Alternaria* leaf blight pathogen (*Alternaria dauci*). European Journal of Plant Pathology, 121: 55-66.
12. **Le Clerc V.**, Pawelec A., Birolleau-Touchard C., Suel A., Briard M., **2009**. Genetic architecture of factors underlying partial resistance to *Alternaria* leaf blight in carrot. Theoretical & Applied Genetics, 118: 1251-1259.
13. Boedo C., Berruyer R., Lecomte M., Bersihand S., Briard M., **Le Clerc V.**, Simoneau P., Poupard P., **2010** Evaluation of different methods for the characterization of carrot resistance to the

Alternaria leaf blight pathogen (*Alternaria dauci*) revealed two qualitatively different resistances. Plant Pathology 59: 368-375.

14. Boedo C., Benichou S., Berruyer R., Bersihand S., Dongo A., Simoneau P., Lecomte M., Briard M., **Le Clerc V.**, Poupard P., **2012**. Evaluating aggressiveness and host range of *Alternaria dauci* in a controlled environment. Plant Pathology 61: 63-75.
15. Jabbes N., Geoffriau E., **Le Clerc V.**, Dridi B., Hannechi C., **2011**. Inter Simple Sequence Repeat Fingerprints for Assess Genetic Diversity of Tunisian Garlic Populations. Journal of Agricultural Science 3: 77-85.
16. Lecomte M., Berruyer R., Hamama L., Boedo C., Hudhomme P., Bersihand S., Arul J., N'Guyen G., Gatto J., Guilet D., Richomme P., Simoneau P., Briard M., **Le Clerc V.**, Poupard P., **2012**. Inhibitory effects of the carrot metabolites 6-methoxymellein and falcarindiol on development of the fungal leaf blight pathogen *Alternaria dauci* Physiological and Molecular Plant Pathology 80: 58-67.
17. **Le Clerc V.**, Suel A., Geoffriau E., Huet S., Briard M., **2014**. Temporal evolution of the genetic diversity of *Chaerophyllum bulbosum*: consequences on the genetic resources management. C.R. Biologies 337: 352-359.
18. **Le Clerc V.**, Suel A., Pawelec A., Marques S., Huet S., Lecomte M., Poupard P., Briard M., **2015**. Is there variety X isolate interaction in the polygenic quantitative resistance of carrot to *Alternaria dauci*? Euphytica 202:235–243. DOI 10.1007/s10681-014-1279-x.
19. **Le Clerc V.**, Marques S., Suel A., Huet S., Hamama L., Voisine L., Auperpin E., Jourdan M., Barrot L., Prieur R., Loi C., Briard M., **2015**. QTL mapping of carrot resistance to leaf blight with connected populations: stability across years and consequences for breeding. TAG DOI 10.1007/s00122-015-2576-z.

Conferences and Posters

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