

Claire CAMPION

Date of birth: 14th 1970

Gender: female

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Current position : assistant professor – Faculty of Sciences, University of Angers

University degrees and qualifications:

- **1993:** DEA (post-graduate degree after my master) in Genetics, Plant Adaptations and Production, University of Rennes I
- **1997:** PhD thesis in Biology, University of Rennes I

Current position : assistant professor – Faculty of Sciences, University of Angers

Courses: plant physiology, phytopathology

Research skills:

- phytopathology
- model : *Alternaria brassicicola*-*Brassicaceae*
- main topics of research: *Alternaria brassicicola* adaptation to plant hosts and environment; interactions between *Alternaria brassicicola* and the seed microbiote; mechanisms of *Alternaria brassicicola* seed-transmission

Full list of publications:

- 1- Le Cam B, Massiot P, Campion C, Rouxel F 1994. Susceptibility of carrot cultivars to *Mycocentrospora acerina* and the structure of cell wall polysaccharides. *Physiol Mol Plant Pathol*, 45 (2), 139-151
- 2- Campion C, Massiot P, Rouxel F 1997. Aggressiveness and production of cell-wall degrading enzymes by *Pythium violae*, *Pythium sulcatum* and *Pythium ultimum*, responsible for cavity spot on carrots. *Eur J Plant Pathol*, 103, 725-735
- 3- Campion C, Vian B, Nicole M, Rouxel F 1998. A comparative study of carrot root tissue colonization and cell wall degradation by *Pythium violae* and *Pythium ultimum*, two pathogens responsible for cavity spot. *Can J Microbiol*, 44, 221-230
- 4- Campion C, Chatot C, Perraton B, Andrivon D 2003. Anastomosis groups, pathogenicity and sensitivity to fungicides of *Rhizoctonia solani* isolates collected on potato crops in France. *Eur J Plant Pathol*, 109, 983-992

- 5- Poupard P, Parisi L, Campion C, Ziadi S, Simoneau P 2003. A wound- and ethephon-inducible *PR-10* gene subclass from apple is differentially expressed during infection with a compatible and incompatible race of *Venturia inaequalis*. *Physiol Mol Plant Pathol*, 62 (1), 3-12
- 6- Roux C, Lemarquand A, Orain A, Campion C, Simoneau P, Poupard P, 2006. Effects of the plant growth regulator prohexadione-calcium and the SAR-inducer acibenzolar-S-methyl on the quality of apples at harvest. *J Hortic Sci Biotech*, 81 (1), 139-145
- 7- de Zélicourt A, Letousey P, Thoiron S, Campion C, Simoneau P, Elmorjani K, Marion D, Simier P, Delavault P, 2007. *Ha-DEF1*, a sunflower defensin, induce cell death in Orobanche parasitic plants. *Planta*, 226, 591-600
- 8- Juchaux-Cachau M, Landouar-Arsivaud L, Pichaut JP, Campion C, Porcheron B, Jeauffre J, Noiraud-Romy N, Simoneau P, Maurousset L, Lemoine R 2007. Characterization of *AgMaT2*, a plasma membrane mannitol transporter from celery, expressed in phloem cells, including phloem parenchyma cells. *Plant Physiol*, 145 (1), 62-749
- 9- Iacomi-Vasilescu B, Bataillé-Simoneau N, Campion C, Dongo A, Laurent E, Serandat I, Hamon B, Simoneau P, 2008. Effect of null mutations in the *AbNIK1* gene on saprophytic and parasitic fitness of *Alternaria brassicicola* isolates highly resistant to dicarboximide fungicides. *Plant Pathol*, 57 (5), 937-947
- 10- Chevalier M, Parisi L, Gueye B, Campion C, Simoneau P, Poupard P, 2008. Specific activation of PR-10 pathogenesis-related genes in apple by an incompatible race of *Venturia inaequalis*. *Biologia Plantarum*, 52 (4), 718-722
- 11- Dongo A, Bataillé-Simoneau N, Campion C, Guillemette T, Hamon B, Iacomi-Vasilescu B, Katz L, Simoneau P, 2009. The group III two-components histidine kinase of filamentous fungi is involved in the fungicidal activity of the bacterial polyketide ambruticin. *Appl Env Microbiol*, 75 (1), 127-134
- 12- Joubert A, Simoneau P, Campion C, Bataillé-Simoneau N, Iacomi-Vasilescu B, Poupard P, François JM, Georgeault S, Sellier E, Guillemette T, 2011. Impact of the unfolded protein response on the pathogenicity of the necrotrophic fungus *Alternaria brassicicola*. *Mol Microbiol*, 79 (5), 1305-1324
- 13- Joubert A, Bataillé-Simoneau N, Campion C, Guillemette T, Hudhomme P, Iacomi-Vasilescu B, Leroy T, Pochon S, Poupard P, Simoneau P, 2011. Cell wall integrity and high osmolarity glycerol pathways are required for adaptation of *Alternaria brassicicola* to cell wall stress caused by brassicaceous indolic phytoalexins. *Cell Microbiol*, 13 (1), 62-80
- 14- Pochon S, Terrasson E, Guillemette T, Iacomi-Vasilescu B, Georgeault S, Juchaux M, Berruyer R, Debeaujon I, Simoneau P, Campion C, 2012. The *Arabidopsis thaliana*-*Alternaria brassicicola* pathosystem: a model interaction for investigating seed transmission of necrotrophic fungi. *Plant Methods*, 8, 1-13
- 15- Pochon S, Simoneau P, Pigné S, Balidas S, Bataillé-Simoneau N, Campion C, Jaspard E, Calmes B, Hamon B, Berruyer R, Juchaux M, Guillemette T, 2013. Dehydrin-like proteins in the necrotrophic fungus *Alternaria brassicicola* have a role in plant pathogenesis and stress response. *PLoS ONE* 8(10): e75143. doi:10.1371/journal.pone.0075143
- 16- Davanture M, Dumur J, Bataillé-Simoneau N, Campion C, Valot B, Zivy M, Simoneau P, Fillinger S, 2014. Phosphoproteome profiles of the phytopathogenic fungi *Alternaria brassicicola* and *Botrytis cinerea* during exponential growth in axenic cultures. *Proteomics*, 14, 1639-1645
- 17- Calmes B, N'Guyen G, Dumur J, Agustí-Brisach C, Campion C, Iacomi B, Pigné S, Dias E, Macherel D, Guillemette T, Simoneau P, 2015. Glucosinolate-derived isothiocyanates impact

mitochondrial function in fungal cells and elicit an oxidative stress response necessary for growth recovery. *Front Plant Sci*, 6: 414. doi: 10.3389/fpls.2015.00414

18- Rezki S, Champion C, Iacomi-Vasilescu B, Prévieux A, Toualbia Y, Bonneau S, Briand M, Laurent E, Hunault G, Simoneau P, Jacques MA, Barret M, 2016. Differences in stability of seed-associated microbial assemblages in response to invasion by phytopathogenic microorganisms. *PeerJ*, doi:10.7717/peerj.1923

19- Rezki S, Champion C, Simoneau P, Jacques MA, Shade A, Barret M, 2018. Assembly of seed-associated microbial communities within and across successive plant generations. *Plant Soil*. doi.org/10.1007/s11104-017-3451-2

20- Belmas E, Briand M, Kwasiborski A, Colou J, N'Guyen G, Iacomi-Vasilescu B, Grappin P, Champion C, Simoneau P, Barret M, Guillemette T, 2018. Genome sequence of the necrotrophic plant pathogen *Alternaria brassicicola* Abra43. *Genome Announcements* 6 (6), e01559-17

21- N'Guyen GQ, Raulo R, Marchi M, Agustí-Brisach C, Iacomi B, Pelletier S, Renou J-P, Bataillé-Simoneau N, Champion C, Bastide F, Hamon B, Mouchès C, Porcheron B, Lemoine R, Kwasiborski A, Simoneau P, Guillemette T 2019. Responses to hydric stress in the seed-borne necrotrophic fungus *Alternaria brassicicola*. *Front Microbiol* 10:1969. doi: 10.3389/fmicb.2019.01969

22- N'Guyen G, Raulo R, Porquier A, Iacomi B, Pelletier S, Renou JP, Bataillé-Simoneau N, Champion C, Hamon B, Kwasiborski A, Colou J, Benamar A, Hudhomme P, Macherel D, Simoneau P, Guillemette T, 2021. Responses of the necrotrophic fungus *Alternaria brassicicola* to the indolic phytoalexin brassinin. *Front Plant Sci*, 11:2216. <https://doi.org/10.3389/fpls.2020.611643>