Frédéric Suffert
Senior researcher in plant disease epidemiology

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BIOGRAPHY

I am plant disease epidemiologist for INRAE, the French National Institute for Agriculture, Food and Environment. I hold an engineering diploma in agronomy specialized in Crop Protection, a PhD in plant pathology from Institut Agro Rennes-Angers, and a HDR (habilitation). I work in the BIOGER research unit located on the Campus Agro Paris-Saclay at Palaiseau. I co-head the team ADEP which focuses on the adaptive and epidemiological processes in wheat-fungal pathogen interactions. I conduct research on the epidemiology of wheat septoria (*Zymoseptoria tritici*), by relying on a scientific approach to agroecology. I study the processes underlying the disease development, drivers and consequences of *Z. tritici* sexual reproduction (fungal biology, ecology of residues as source of primary inoculum, etc.), and adaptive dynamics of pathogen populations (virulence and agressiveness patterns) in heterogeneous environments (deployment of resistances in cultivar mixtures, seasonal variations of temperature and moisture conditions, etc.). I have supervised several PhD candidates (ED ABIES) on this topic. I am also interested in the impact of interactions between cultivated and wild compartments (roles of alternating and alternative hosts, service vs. disservice plants, etc.) on the dynamics of diseases with complex biological cycles. In 2023 I initiated a research program on the epidemiology of stem rust (*Puccinia graminis* f. sp. *tritici*), which is considered reemerging in Europe. I graduated from the IHEDN and I address cindynic issues applied to epidemiosurveillance and crop biosecurity for governmental agencies (see C&Aw pages for a comprehensive agroterrorism horizon scanning). I am member of the ANSES expert committee Risques Biological Risks to Plant Health and participates in expertise activities for INRAE (e.g. ESCo INRAE RegulNat). I am member of the scientific council of the INRAE Plant Heath division (SPE) and member of the steering committee of the international health monitoring (VSI) for the French plateform for Epidemiosurveillance in Plant Health (ESV). I am member of the board of the French Phytopathological Society (SFP) and associate editor for Journal of Plant Pathology. I am member of the Association of Naturalists of the Yvelines (ANY) and an enthusiatic photographer of micromycetes (mainly rusts and powdery mildews), during "phytopathological strolls".

POSITIONS

• 2022-…	Senior scientist (IRHC), co-head of the team *Adaptive and epidemiological processes in wheat-fungal pathogen interactions (ADEP)*, UR1290 BIOGER, INRAE Palaiseau (Thiverval-Grignon until 2022), France
• 2007-2022	Senior scientist (IR1), head of the team *Evolutionary Epidemiology of Fungal Wheat Pathogens (EPIDEV)*, UR1290 BIOGER, INRAE Thiverval-Grignon, France
• 2000-2007	Junior scientist in the group *Epidemiology of Soil-borne Diseases*, UMR1099 IGEPP, INRA Rennes, France

EDUCATION

• 2015	Habilitation to Supervise Research (Université Paris XI - Orsay). HDR dissertation "*Inoculum-centered processes and mechanisms: Towards a functional and experimental approach of plant disease epidemiology*" defended on June 23, 2015
• 2006	Former auditor of the Institute for Higher National Defence Studies (IHEDN)
• 2006	PhD in Plant Pathology (Doctoral School VAS, Rennes). PhD dissertation "*Epidemiology of the carrot cavity spot*" defended on June 20, 2006
• 1999	Agronomy Engineer (MSc) of Institut Agro Rennes-Angers, specialization in "*Plant Protection and Environment*"
• 1995-1996	BCPST (Lycée Fermat, Toulouse)

ASSOCIATIVE DUTIES

• 2016-2022	General Secretary of the *French Phytopathological Society* (SFP)

PUBLICATIONS

PEER-REVIEWED ARTICLES AND PREPRINTS (* equal contribution)

[A1] **Suffert F** (2005) A theoretical approach to the "complementation" notion concerning strategies of crop protection. *Phytoprotection* **86**: 89-92. http://dx.doi.org/10.7202/012509ar

[A2] **Suffert F**, Guibert M (2007) The ecology of a *Pythium* community in relation to the epidemiology of carrot cavity spot. *Applied Soil Ecology* **35**: 488-501. http://dx.doi.org/10.1016/j.apsoil.2006.10.003

[A3] **Suffert F** (2007) Kinetics modelling of the carrot cavity spot caused by a complex of pathogens of the genus *Pythium* dominated by *Pythium violae*. *Canadian Journal of Plant Pathology* **29**: 41-55. http://dx.doi.org/10.1080/07060660709507436

[A4] **Suffert F**, Montfort F (2007) Demonstration of secondary infection by *Pythium violae* in epidemics of carrot cavity spot using root transplantation as method of soil infestation. *Plant Pathology* **56**: 588-594. http://dx.doi.org/10.1111/j.1365-3059.2007.01566.x

[A5] Desprez-Loustau ML, Robin C, Buée M, Courtecuisse R, Garbaye J, **Suffert F**, Sache I, Rizzo D (2007) The fungal dimension of biological invasions. *Trends in Ecology and Evolution* **22**: 472-480. http://dx.doi.org/10.1016/j.tree.2007.04.005

[A6] Latxague E, Sache I, Pinon J, Andrivon D, Barbier M, **Suffert F** (2007) A methodology for assessing the risk posed by the deliberate and harmful use of plant pathogens in Europe. *EPPO Bulletin* **37**: 427-435. http://dx.doi.org/10.1111/j.1365-2338.2007.01118.x

[A7] **Suffert F**, Montfort F (2008) Pathometric relationships reveal epidemiological processes involved in carrot cavity spot epidemics. *European Journal of Plant Pathology* **122**: 425-436. http://dx.doi.org/10.1007/s10658-008-9309-y

[A8] **Suffert F**, Delalande D, Prunier M, Andrivon D (2008) Modulation of primary and secondary infections in epidemics of carrot cavity spot through agronomic management practices. *Plant Pathology* **57**: 109-121. http://dx.doi.org/10.1111/j.1365-3059.2007.01708.x

[A9] **Suffert F**, Lucas JM (2008) Lateral roots of carrot have a low impact on alloinfections involved in a cavity spot epidemic caused by *Pythium violae*. *Journal of General Plant Pathology* **74**: 296-301. http://dx.doi.org/10.1007/s10327-008-0104-6

[A10] **Suffert F**, Latxague E, Sache I (2009) Plant pathogens as agroterrorist weapons: Assessment of the threat for European agriculture and forestry. *Food Security* **1**: 221-232. http://dx.doi.org/10.1007/s12571-009-0014-2

[A11] Gosme M, **Suffert F**, Jeuffroy MH (2010) Intensive versus low-input cropping systems: What is the optimal partitioning of agricultural area in order to reduce pesticide use while maintaining productivity? *Agricultural Systems* **103**: 110-116. http://dx.doi.org/10.1016/j.agsy.2009.11.002

[A12] **Suffert F**, Sache I, Lannou C (2011) Early stages of septoria tritici blotch epidemics of winter wheat: Build-up, overseasoning, and release of primary inoculum. *Plant Pathology* **60**: 166-177. http://dx.doi.org/10.1111/j.1365-3059.2010.02369.x

[A13] **Suffert F**, Sache I (2011). Relative importance of different types of inoculum to the establishment of *Mycosphaerella graminicola* in wheat crops in north-west Europe. *Plant Pathology* **60**: 878-889. http://dx.doi.org/10.1111/j.1365-3059.2011.02455.x

[A14] Ben Slimane R, Bancal P, **Suffert F**, Bancal M-O (2011). Localized septoria leaf blotch lesions in winter wheat flag leaf do not accelerate apical senescence during necrotrophic stage. *Journal of Plant Pathology* **94**: 543-553. http://dx.doi.org/10.4454/JPP.FA.2012.055

[A15] Bernard F, Sache I, **Suffert F**, Chelle M (2013) The development of a foliar fungal pathogen does react to leaf temperature! *New Phytologist* **198**: 232-240. http://dx.doi.org/10.1111/nph.12134

[A16] **Suffert F**, Sache I, Lannou C (2013) Assessment of quantitative traits of aggressiveness in *Mycosphaerella graminicola* on adult wheat plants. *Plant Pathology* **62**: 1330-1341. http://dx.doi.org/10.1111/ppa.12050

[A17] Siou D, Gelisse S, Laval V, Repinçay C, Canalès R, **Suffert F**, Lannou C (2013). Effect of wheat spike infection timing on *Fusarium* head blight development and mycotoxin accumulation. *Plant Pathology* **63**: 390-399. http://dx.doi.org/10.1111/ppa.12106

[A18] Gautier A, Marcel T, Confais J, Crane C, Kema G, **Suffert F**, Walker A-S (2014) Development of a rapid multiplex SSR genotyping method to study populations of the plant pathogenic fungus *Mycosphaerella graminicola*. *BMC Research Notes* **7**: 373. http://dx.doi.org/10.1186/1756-0500-7-373

[A19] Siou D, Gélisse S, Laval V, Repinçay C, Bourdat-Deschamps M, **Suffert F**, Lannou C (2014) Interactions between head blight pathogens: consequences on disease development and toxins production in wheat spikes. *Applied and Environmental Microbiology* **81**: 957-965. http://dx.doi.org/10.1128/aem.02879-14

[A20] Siou D, Gélisse S, Laval V, **Suffert F**, Lannou C (2015) Mutual exclusion between fungal species of the FHB complex in a wheat spike. *Applied and Environmental Microbiology* **81**: 4682-4689. http://dx.doi.org/10.1128/AEM.00525-15

[A21] **Suffert F**, Ravigné V, Sache I (2015) Seasonal changes drive short-term selection for fitness traits in the wheat pathogen *Zymoseptoria tritici*. *Applied and Environmental Microbiology* **81**: 6367-6379. http://dx.doi.org/10.1128/AEM.00529-15

[A22] Morais D, Laval V, Sache I, **Suffert F** (2015) Comparative pathogenicity of sexual and asexual spores of *Zymoseptoria tritici* (Septoria tritici blotch) on wheat leaves. *Plant Pathology* **64**, 1429–1439. http://dx.doi.org/10.1111/ppa.12372

[A23] Morais D, Sache I, **Suffert F***, Laval V (2016) Is onset of Septoria tritici blotch epidemics related to local availability of ascospores? *Plant Pathology* **65**, 250-260. http://dx.doi.org/10.1111/ppa.12408

[A24] Morais D, Gélisse S, Laval V, Sache I, **Suffert F** (2016) Inferring the origin of primary inoculum of *Zymoseptoria tritici* from differential adaptation of resident and immigrant populations to wheat cultivars. *European Journal of Plant Pathology* **145**, 393-404. http://dx.doi.org/10.1007/s10658-015-0853-y

[A25] **Suffert F**, Delestre G, Carpentier F, Walker AS, Gazeau G, Gélisse S, Duplaix C (2016) Fashionably late partners have more fruitful encounters: impact of the timing of co-infection and pathogenicity on sexual reproduction in *Zymoseptoria tritici*. *Fungal Genetics and Biology* **92**: 40-49. http://dx.doi.org/10.1016/j.fgb.2016.05.004

[A26] Soubeyrand S, Garreta V, Monteil C, **Suffert F**, Goyeau H, Berder J, Berge O, Moinard J, Fournier E, Tharreau D, Morris C, Sache I (2017) Testing differences between pathogen compositions with small samples and sparse data. *Phytopathology* **107**: 1199-1208. https://doi.org/10.1094/PHYTO-02-17-0070-FI

[A27] **Suffert F**, Goyeau H, Sache I, Carpentier F, Gélisse S, Morais D, Delestre G (2018) Epidemiological trade-off between intra- and interannual scales in the evolution of aggressiveness in a local plant pathogen population. *Evolutionary Applications* **11**: 768-780 (also peer-reviewed by *PCI Evolutionary Biology*) https://doi.org/10.1111/eva.12588

[A28] **Suffert F**, Delestre G, Gélisse S (2018) Sexual reproduction in the fungal foliar pathogen *Zymoseptoria tritici* is driven by antagonistic density-dependence mechanisms. *Microbial Ecology* **77**: 110-123 http://dx.doi.org/10.1007/s00248-018-1211-3

[A29] **Suffert F,** Thompson R (2018) Some reasons why the latent period should not always be considered constant over the course of a plant disease epidemic. *Plant Pathology* **67:** 1831-1840 https://doi.org/10.1111/ppa.12894

[A30] Boixel A-L, Delestre G, Legeay J, Chelle M, **Suffert F** (2019) Phenotyping thermal responses of yeasts and yeast-like microorganisms at the individual and population levels: proof-of-concept, development and

application of an experimental framework to a plant pathogen. *Microbial Ecology* **78**: 42-56 https://doi.org/10.1007/s00248-018-1253-6

[A31] Morais D, Duplaix C, Sache I, Laval V, **Suffert F***, Walker A-S (2019) Overall stability in the genetic structure of a *Zymoseptoria tritici* population from epidemic to interepidemic stages at a small spatial scale. *European Journal of Plant Pathology*, **154:** 423-436 https://doi.org/10.1007/s10658-018-01666-y

[A32] Kerdraon L, Balesdent M, Barret M, Laval V, **Suffert F** (2019) Crop residues in wheat-oilseed rape rotation system: a pivotal, shifting platform for microbial meetings. *Microbial Ecology* **77**: 931-945 https://doi.org/10.1007/s00248-019-01340-8

[A33] Kerdraon L, Barret M, Laval V, **Suffert F** (2019) Differential dynamics of microbial community networks help identify microorganisms interacting with residue-borne pathogens: the case of *Zymoseptoria tritici* in wheat. *Microbiome* **7:** 125 https://doi.org/10.1186/s40168-019-0736-0

[A34] Kerdraon L, Laval V, **Suffert F** (2019) Microbiomes and pathogen survival in crop residues, an ecotone between plant and soil. *Phytobiomes Journal* **3**: 246-255 https://doi.org/10.1094/PBIOMES-02-19-0010-RVW

[A35] Kerdraon L, Barret M, Balesdent M, **Suffert F***, Laval V (2020) Impact of a resistance gene against a fungal pathogen on the plant host residue microbiome: the case of the *Leptosphaeria maculans-Brassica napus* pathosystem. *Molecular Plant Pathology* **21**: 1545-1558 https://doi.org/10.1111/mpp.12994

[A36] Paumier D, Bammé B, Penaud A, Valade R, **Suffert F** (2021) First report of the sexual stage of the flax pathogen *Mycosphaerella linicola* in France and its impact on pasmo epidemiology. *Plant Pathology* **70**: 475-483 https://doi.org/10.1111/ppa.13296

[A37] Laval V, Kerdraon L, Barret M, Boudier B, Liabot A-L, Marais C, Balesdent M, Fischer-Le Saux M, **Suffert F** (2021) Assessing the cultivability of bacteria and fungi from arable crop residues. *Diversity* **13**: 404 https://doi.org/10.3390/d13090404

[A38] Ben Krima S, Slim A, Gélisse S, Houki H, Nadaud I, Sourdille P, Yahyaoui A, Ben M'Barek S, **Suffert F**, Marcel TC (2021) Life story of Tunisian durum wheat landraces revealed by their genetic and phenotypic diversity. *bioRxiv* https://doi.org/10.1101/2020.08.14.251157

[A39] Orellana-Torrejon C, Vidal T, Boixel A-L, Sandrine Gélisse, Saint Jean S, **Suffert F** (2022). Annual dynamics of *Zymoseptoria tritici* populations in a wheat cultivar mixture: a compromise between the efficiency and durability of a recently broken-down resistance gene? *Plant Pathology* **71**: 289-303 https://doi.org/10.1111/ppa.13458

[A40] Karisto P, **Suffert F**, Mikaberidze A (2022) Measuring splash-dispersal of a major wheat pathogen in the field. *PhytoFrontiers* **2**: 30-40 https://doi.org/10.1094/PHYTOFR-05-21-0039-R

[A41] Vialatte A, Tibi A, Alignier A, Angeon V, Bedoussac L, Bohan D, Bougherara D, Carpentier A, Castagneyrol B, Cordeau S, Courtois P, Deguine J-P, Enjalbert J, Fabre F, Féménia F, Fréville H, Goulet F, Grateau R, Grimonprez B, Gross N, Hannachi M, Jeanneret P, Kuhfuss L, Labarthe P, Launay M, Lefebvre M, Lelièvre V, Lemarié S, Martel G, Masson A, Navarette M, Plantegenest M, Ravigné V, Rusch A, **Suffert F**, Tapsoba A, Thérond O, Thoyer S, Martinet V (2022). Promoting crop pest control by plant diversification in agricultural landscapes: a conceptual framework for analysing feedback loops between agro-ecological effects and socio-economical levers and locks. *Advances in Ecological Research* **65**: 133-165 https://doi.org/10.1016/bs.aecr.2021.10.004

[A42] **Suffert F**, Suffert M (2022). 'Phytopathological strolls' in the dual context of Covid-19 lockdown and IYPH2020: transforming constraints into an opportunity for a popular education on plant pathogens. *Plant Pathology* **71**: 30-42 https://doi.org/10.1111/ppa.13430

[A43] Boixel A-L, Gélisse S, Marcel T, **Suffert F** (2022) Differential tolerance of *Zymoseptoria tritici* to altered optimal moisture conditions during the early stages of wheat infection. *Journal of Plant Pathology* **104**: 495-507 https://doi.org/10.1007/s42161-021-01025-7

[A44] Boixel A-L, Chelle M, **Suffert F** (2022) Patterns of thermal adaptation in a globally-distributed plant pathogen: local diversity and plasticity reveal two-tier dynamics. *Ecology and Evolution* **12**: e8515 https://doi.org/10.1002/ece3.8515

[A45] Orellana-Torrejon C, Vidal T, Saint Jean S, **Suffert F** (2022) The impact of cultivar mixtures on virulence dynamics in *Zymoseptoria tritici* populations persist after interseason sexual reproduction. *Plant Pathology* **71**: 1537-1549 https://doi.org/10.1111/ppa.13577

[A46] Bernard F, Chelle M, Riahi El Kamel O, Pincebourde S, Sache I, **Suffert F** (2022) Daily fluctuations in leaf temperature modulate the development of a foliar pathogen. *Agricultural Forest Meteorology* **322**: 109031 https://doi.org/10.1016/j.agrformet.2022.109031

[A47] Fontyn C, Zippert AC, Delestre G, Marcel TC, **Suffert F**, Goyeau H (2022) Is the evolution of virulence phenotype in French *Puccinia triticina* exclusively driven by *Lr* genes deployment? *Plant* Pathology **71**: 1511-1524 https://doi.org/10.1111/ppa.13599

[A48] Barroso-Bergada D, Vignolles N, Massot M, Faivre d'Arcier J, Chancerel E, Guichoux E, Walker A-S, Bohan DA, Vacher C, Laval F, **Suffert F** (2022) NGS data revealing the phyllosphere microbiome of wheat plants infected by the fungal pathogen *Zymospetoria tritici* https://doi.org/10.1094/PBIOMES-02-22-0008-FI, *Phytobiomes Journal*, in press

[A49] McDonald B, **Suffert F**, Bernasconi A, Mikaberidze A (2022) How large and diverse are field populations of fungal plant pathogens? The case of *Zymoseptoria tritici*. *Evolutionary Applications* **15**: 1360-1373 https://doi.org/10.1111/eva.13434

[A50] Rodriguez-Algaba J, Hovmøller MS, Schulz P, Hansen JG, Lezaun JA, Joaquim J, Randazzo B, Czembor P, Zemeca L, Slikova S, Hanzalová A, Holdgate S, Wilderspin S, Mascher F, **Suffert F**, Leconte M, Flath K, Justesen AF (2022) Stem rust on barberry species in Europe: Host specificities and genetic diversity. *Frontiers in Genetics* **13**: 988031 https://doi.org/10.3389/fgene.2022.988031

[A51] Orellana-Torrejon C, Vidal T, Gazeau G, Boixel A-L, Gélisse S, Lageyre J, Saint Jean S, **Suffert F** (2022) Multiple scenarios for sexual crosses in the fungal pathogen *Zymoseptoria tritici* on wheat residues: potential consequences for virulence gene transmission. *Fungal Genetics and Biology* **163**: 103744 https://doi.org/10.1016/j.fgb.2022.103744

[A52] Lapalu N, Simon A, Demenou B, Paumier D, Guillot MP, **Suffert F**, Gout L, Valade R (2022) Complete genome sequences of *Septoria linicola*: a resource for studying a damaging flax pathogen. *Molecular Plant-Microbe Interactions*, **36**: 59-63 https://doi.org/10.1094/MPMI-09-22-0185-A

[A53] Feurtey A, Lorrain C, McDonald MC, Milgate A, Solomon P, Warren R, Puccetti G, Scalliet G, Torriani S, Gout L, Marcel T, **Suffert F**, Alassimone J, Lipzen A, Yoshinaga Y, Daum C, Barry K, Grigoriev I, Goodwin SB, Genissel A, Seidl MF, Stukenbrock EH, Lebrun M-H, Kema G, McDonald BA, Croll D (2022). A thousand-genome panel retraces the global spread and climatic adaptation of a major fungal crop pathogen. *Nature Communications*, **14**: 1059 https://doi.org/10.1038/s41467-023-36674-y

[A54] Bourgeois TP, **Suffert F**, Durya G, Biaua G, Lacoste S, Prado S, Dupont J, Salmon S (2023) Dietary preferences of *Heteromurus nitidus* (Collembola) among wheat fungal communities: implications for bioregulation of two widespread pathogens. *Applied Soil Ecology*, **188**: 104897 https://doi.org/10.1016/j.apsoil.2023.104897

[A55] Karisto P, **Suffert F**, Mikaberidze A (2023) Spatially explicit ecological modeling improves empirical characterization of dispersal. *Plant-Environment Interactions*, **4**: 86-96 https://doi.org/10.1002/pei3.10104

[A56] Fontyn C, Meyer KJG, Boixel A-L, Delestre G, Piaget E, Picard C, **Suffert F**, Marcel TC, Goyeau H (2023) Evolution within a given virulence phenotype (pathotype) is driven by change in aggressiveness: a case study on French wheat leaf rust populations. *Peer Community Journal, section Infections*, **3**: e39 https://doi.org/10.24072/pcjournal.264

[A57] Langlands-Perry C, Pitarch A, Lapalu N, Bergez C, Cuenin M, Gélisse S, Barrachina C, Parrinello H, **Suffert S**, Valade R, Marcel TC (2023). Quantitative and qualitative plant-pathogen interactions call upon similar pathogenicity genes with a spectrum of effects. *Frontiers in Plant Science*, **14**: 1128546 https://doi.org/10.3389/fpls.2023.1128546

[A58] Barroso-Bergada D, Tamaddoni-Nezhad D, Varghese D, Vacher C, Galic N, Laval V, **Suffert F**, Bohan DA. (2023). Unravelling the web of dark interactions: explainable inference of the diversity of microbial interactions. *Advances in Ecological Research*, **68**: 155-183 https://doi.org/10.1016/bs.aecr.2023.09.005

[A59] Boixel A-L, Goyeau H, Berder J, Moinard J, **Suffert F**, Soubeyrand S, Sache I, Vidal T (2024) A landscape-scale field survey demonstrates the role of wheat volunteers as a local and diversified source of leaf rust inoculum. *Scientific Reports*, **13**: 20411 https://doi.org/10.1038/s41598-023-47499-6

[A60] Meyer KJG, Leconte M, Vidal T, Goyeau H, **Suffert F** (2024) Is thermal aptitude a pivotal driver in the establishment of recent *Puccinia striiformis* f. sp. *tritici* lineages in Europe? *Journal of Plant Pathology*, in press https://doi.org/10.1007/s42161-024-01590-7

[A61] Bourgeois TP, Prado S, **Suffert F***, Salmon S (2024) *Heteromurus nitidus* (Collembola) grazes the wheat pathogenic fungus *Zymoseptoria tritici* on infected tissues: opportunities and limitations for bioregulation. *Pest Management Science*, in press https://doi.org/10.1002/ps.8026

[A62] **Suffert F**, Le Prieur S, Dzialo S, Gélisse S, Marcel T (2024) Estimating the frequency of virulence against *Stb* genes in *Zymoseptoria tritici* populations with bulk phenotyping on checkerboard micro-canopies of wheat NILs. *Plant pathology*, in press https://doi.org/10.1111/ppa.13894

[A63] Fontyn C, Meyer KJG, Boixel A-L, Picard C, Destanque A, Marcel TC, **Suffert F**, Goyeau H (2024) Can higher aggressiveness effectively compensate for a virulence deficiency in plant pathogen? A case study of *Puccinia triticina*'s fitness evolution in a diversified varietal landscape. *Journal of Plant Pathology*, submitted https://doi.org/10.1101/2023.06.09.544363

[A64] Soubeyrand S, Estoup A, Cruaud A, Malembic-Maher S, Meynard C, Ravigné V, Barbier M, Barrès B, Berthier K, Boitard S, Dallot S, Gaba S, Grosdidier M, Hannachi M, Jacques M-A, Leclerc M, Lucas P, Martinetti D, Mougel C, Robert C, Roques A, Rossi J-P, **Suffert F**, Abad P, Auger-Rozenberg M-A, Ay J-S, Bardin M, Bernard H, Bohan DA, Candresse T, Castagnone-Sereno P, Danchin EGJ, Delmas CEL, Ezanno P, Fabre F, Facon B, Gabriel E, Gaudin J, Gauffre B, Gautier M, Guinat C, Lavigne C, Lemaire O, Martinez C, Michel L, Moury B, Nam K, Nédellec C, Ogliastro M, Papaïx J, Parisey N, Poggi S, Radici A, Rasplus J-Y, Reboud X, Robin C, Roche M, Rusch A, Sauvion N, Streito J-C, Verdin E, Walker A-S, Xuéreb A, Thébaud G, Morris CE (2024) Research strategies for developing integrated plant health surveillance to anticipate and mitigate disease and pest emergence in the face of global change. *CABI Agriculture and Bioscience*, submitted.

[A65] Moreau D, Ballini E, Chave M, Cordeau S, Djian-Caporalino C, Lavoir A-V, **Suffert F**, Cortesero A-M (2024) Potential of service plants for multi-pest regulation in agroecosystems. A review based on the analysis of compatibility in regulation mechanisms and service plant traits. *Agronomy for Sustainable Development*, submitted.

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OTHER ARTICLES

[OA1] **Suffert F** (2002) L'épidémiologie végétale, nouvelle discipline de guerre ? Lumière sur le bioterrorisme agricole, un enjeu émergent pour la recherche agronomique. *Le Courrier de l'Environnement* **47**: 57-69.

[OA2] **Suffert F** (2003) L'utilisation volontaire d'agents phytopathogènes contre les cultures. *Phytoma* **563**: 8-12.

[OA3] **Suffert F** (2007) Cavity spot de la carotte, l'épidémiologie appliquée à la gestion des risques parasitaires. Comprendre et modéliser les mécanismes d'une maladie d'origine tellurique dans une perspective de protection intégrée. *Phytoma* **601**: 36-40.

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EXPERTISE ACTIVITIES

• 2012-2018 Member of the expert committee *CES Biological Risk for Plant Health* for the French Agency for Food, Environmental and Occupational Health and Safety (ANSES)

• Coordinator of 5 expert reports as chairman of *ad-hoc* working groups and rapporteur for the CES:
- « Analyse de risque phytosanitaire *Plasmopara halstedii* - agent responsable de la maladie du mildiou tournesol »
- « Avis relatif à un protocole expérimental de traitement par micro-injection de fongicides dans le cadre de la lutte contre le chancre coloré du platane (*Ceratocystis platani*) et évaluation des risques de dissémination de l'organisme nuisible lié à la mise en œuvre de cette expérimentation »
- « Avis relatif à l'analyse de risque lié à la transformation des fruits d'agrumes contaminés par *Phyllosticta citricarpa* dans des conditions garantissant la maîtrise du

risque de contamination du territoire de l'Union Européenne »
- « Évaluation de démarches collectives engagées contre le charançon rouge du palmier par la Communauté d'agglomération Var-Esterel-Méditerranée (CAVEM) »
- « Stratégies de lutte contre le charançon rouge du palmier »

• Member of an *ad-hoc* working group in ANSES « Stratégie de lutte vis-à-vis de *Xylella fastidiosa* » (phase 1 and 2)

• Contribution to >50 expert reports and opinion papers as CES member (complete list available on https://www.anses.fr/)

• 2019-… Member of two working groups "SORE" and "International Health Surveillance (VSI)" for the DGAL-INRAE-ANSES Plant Health Epidemiosurveillance Platform of Avignon (ESV)

• 2019-… Member of the scientific committee of the National Action Plan against declining Vineyards (PNDV)

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[C44] Vidal T, Lusley P, Leconte M, **Suffert F**, de Vallavieille-Pope C, Huber L, Saint-Jean L (2015) Effects of wheat varietal resistance, canopy structure and rainfall characteristics on a splash dispersal cycle of septoria tritici blotch. *Zymospetoria tritici Meeting*, September 10-11 2015, Paris, France.

[C45] **Suffert F**, Morais D, Delestre G, Gélisse S, Laval V, Sache S (2016) Investigation of the mechanisms of sexual reproduction in *Zymoseptoria tritici* and their consequences on STB dynamics. *9th International Symposium on Septoria Diseases of Cereals*, April 3-6 2016, Paris, France.

[C46] Boixel A-L, Bernard F, Legeay J, Sache I, Chelle M, **Suffert F** (2016) Response of French *Zymoseptoria tritici* populations to temperature at different spatio-temporal scales. *9th International Symposium on Septoria Diseases of Cereals*, April 3-6 2016, Paris, France.

[C47] Boixel A-L, Chelle M, **Suffert F** (2017) Spatio-temporal diversity of thermal responses in populations of the wheat pathogen *Zymoseptoria tritici*. *12th EFPP-10th SFP Conference*, May 29 to June 2 2017, Malo-les-Bains, France.

[C48] **Suffert F**, Goyeau H, Sache I, Carpentier F, Gélisse S, Morais D, Delestre G (2018) The pace of aggressiveness evolution and host adaptation in a plant pathogen population. *10e Rencontres de Phytopathologie / Mycologie*, January 16-19 2018, Aussois, France.

[C49] Boixel A-L, Svensson E, **Suffert F** Chelle M, (2018) Mechanisms behind population responses to variable thermal environments: experiments and model-based analyses of the role of intraspecific phenotypic variation. *SFECOLOGIE / International Conference on Ecological Sciences*, October 22-25 2018, Rennes, France.

[C50] Goyeau H, Halkett F, Delestre G, Gautier A, Zippert A-C, Lecutier N, Laval V, Lannou C, **Suffert F** (2018) Selection in clonal populations of *Puccinia triticina* over 18 years of evolving host landscape in France. *ICRPMC / International Cereal Rusts and Powdery Mildews Coneference*, September 23-26 2018, Skukuza, South-Africa.

[C51] Orellana-Torrejon C, Boixel A-L, Vidal T, Saint-Jean S, **Suffert F** (2019) Impact of wheat cultivar mixtures on Zymoseptoria tritici evolution over the course of an annual epidemic: the case of the ongoing breakdown of Stb16q. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[C52] Boixel A-L, Chelle M, **Suffert F** (2019) Hectic life on wheat leaves: dynamics of phenotypic selection within *Zymoseptoria tritici* populations facing microclimatic heterogeneities. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[C53] Kerdraon L, Balesdent M-H, Barret M, **Suffert F**, Laval V (2019) Combined approaches to identify the incidence of *Zymoseptoria tritici on* microbial community in the wheat residues ecosystem. 18th *IS-MPMI Congress on Molecular Plant-Microbe Interactions*, July 14-18, 2019, Glasgow, UK.

[C54] Orellana-Torrejon C, Boixel A-L, Vidal T, Saint-Jean S, **Suffert F** (2020). Impact d'associations variétales de blé tendre sur le développement de la septoriose en fin de saison culturale. *2èmes biennales de l'innovation céréalière - Phloème*, January 29-30, 2020, Paris, France.

[C55] Amezrou R, Gazeau G, Lapalu N, Meyer L, **Suffert F**, Fillinger S, Walker A-S, Marcel TC (2022) Antagonistic pleiotropic effects reduce adaptation in a major wheat pathogen. International Symposium on Cereal Leaf Blights (ISCLB2022), May 11-13 2022, Tunis, Tunisia.

[C56] Ben Krima S, Slim A, Delestre G, Gélisse S, Gazeau G, Hamza S, **Suffert F**, Marcel TC (2022). Diversity and adaptation of a fungal pathogen in genetically homogeneous vs heterogeneous host plant populations. International Symposium on Cereal Leaf Blights (ISCLB2022), May 11-13 2022, Tunis, Tunisia.

[C57] Orellana-Torrejon C, Gélisse S, Boixel A-L, Vidal T, Saint-Jean S, **Suffert F** (2022). Impact of wheat cultivar mixtures on the dynamics of a virulence against a recently brokendown resistant gene in a *Zymoseptoria tritici* population. *11e Rencontres de Phytopathologie / Mycologie*, September 12-16 2022, Aussois, France.

[C58] Fontyn C, Marcel TC, Goyeau H, **Suffert F** (2022). L'agressivité est-elle une composante significative de l'adaptation au paysage variétal cultivé des populations de *Puccinia triticina*, agent de la rouille brune du blé. *3èmes biennales de l'innovation céréalière - Phloème*, November 3-4, 2022, Paris, France.

[C59] **Suffert F**, Suffert F (2023) From phytopathological strolls to social media scrolls: an opportunity to raise awareness of plant pathogens. *International Congress of Plant Pathology (ICPP2023)*, August 21-25, Lyon, France.

[C60] Vidal T, Duvivier M, Gaubrie S, Heick TM, Hellin P, Kildea S, **Suffert F** (2023) Contrasted effects of wheat cultivar mixture on septoria tritici blotch between European sites: investigating key factors involved in mixture effect variation. *International Congress of Plant Pathology (ICPP2023)*, August 21-25, Lyon, France.

[C61] **Suffert F**, Le Prieur S, Dzialo S, Gélisse S, Marcel T (2023) Estimating the frequency of virulence in Zymoseptoria tritici populations by combining bulk phenotyping and molecular approaches. *12e Rencontres de Phytopathologie / Mycologie*, January 15-19 2024, Aussois, France.

POSTERS

[P1] Huber L, Sache I, Geagea L, **Suffert F**, McCartney HA (2000) Effects of rain on dispersal of wheat rust spores. *2nd European Symposium on Aerobiology*, September 5-9 2000, Vienne, Autriche.

[P2] **Suffert F**, Sache I, Huber L (2000). Effets de divers types de pluie sur la dispersion de spores de rouille jaune (*Puccinia striiformis*) et de rouille brune (*Puccinia recondita* f.sp. *tritici*) sur blé. *6e Conférence Internationale sur les Maladies des Plantes ANPP*, December 6-8 2000, Tours, France.

[P3] Sache I, Cogniat E, Flura D, Geagea L, Huber L, **Suffert F** (2001) Effets de la pluie sur la progression épidémique des rouilles du blé. *5e Congrès de la Société Française de Phytopathologie*, March 26-29 2001, Angers, France.

[P4] **Suffert F**, Guibert M, Prunier M, Montfort F (2002) Influence de la densité d'inoculum sur le développement d'une épidémie de cavity-spot sur carottes causées par *Pythium violae* en conditions naturelles. *4e Rencontres de Phytopathologie / Mycologie*, March 13-17 2002, Aussois, France.

[P5] **Suffert F**, Guibert M (2003) Evolution d'un complexe *Pythium* responsable du cavity spot de la carotte après infestation de parcelles par *P. violae* : conséquences sur l'interprétation d'essais en plein champ. *7e Conférence Internationale sur les Maladies des Plantes AFPP*, December 3-5 2003, Tours, France.

[P6] **Suffert F**, Guibert M, Beuzelin J, Montfort F (2005) Ecologie d'un complexe de *Pythium* associés à la carotte : évolution de la diversité inter-spécifique après infestation d'un sol par *P. violae* - Conséquence sur l'épidémiologie du cavity spot. *6e Congrès de la Société Française de Phytopathologie*, February 23-24 2005, Toulouse, France.

[P7] **Suffert F**, Latxague E, Sache I, Pinon J, Andrivon D, Barbier M, Gullino ML (2005) Multicriterial characterisation of plant pathogens usable for agroterrorism prevention in Europe. *International Plant Health Risk Analysis Workshop*, October 24-28 2005, Niagara Falls, Canada.

[P8] Euzen A, Fournet S, **Suffert F**, Bissuel C (2007). Diagnosis method for assessing the influence of farming factors on carrot yield variations due to soil pathogens (fungus and nematodes). The case of Landes, south west of France. *32nd International Carrot Conference*, September 7-9 2007, Arcachon, France.

[P9] Bernard F, Chelle M, Sache I, **Suffert F**, Fortineau A, Duhamel F (2011) La température de feuille comme nouvel indicateur de développement des symptômes de septoriose du blé : le cas de la période d'incubation. *Journées de l'Ecole doctorale ABIES*, March 29- 30 2011, Paris, France.

[P10] **Suffert F**, Galet N, Sache I (2011) Effect of wheat debris as source of primary inoculum on the early stages of septoria leaf blotch epidemics. *8th International Symposium on Mycosphaerella and Stagonospora Diseases of Cereals*, September 11-14 2011, Mexico, Mexique. Book of abstracts, p. 80.

[P11] Bernard F, Fortineau A, Duhamel F, Sache I, Chelle M, **Suffert F** (2011) An experimental method to simultaneously characterize the effect of leaf temperature on the disease development on several leaves for a given temperature range. *8th International Symposium on Mycosphaerella and Stagonospora Diseases of Cereals*, September 11-14 2011, Mexico, Mexique. Book of abstracts, p. 66.

[P12] Girardin G, Gigot C, Robert C, de Vallavieille-Pope C, **Suffert F**, Saint-Jean S (2011) Effect of wheat canopy architecture and rain characteristics in splash dispersal of *Mycosphaerella graminicola* pycnidiospores. *8th International Symposium on Mycosphaerella and Stagonospora Diseases of Cereals*, September 11-14 2011, Mexico, Mexique. Book of abstracts, p. 85.

[P13] **Suffert F**, Sache I, Lannou C (2012) Quantification des composantes d'agressivité de *Mycosphaerella graminicola*, agent de la septoriose du blé. *9e Rencontres de Phytopathologie / Mycologi*e, January 16-20 2012, Aussois, France.

[P14] Morais D, **Suffert F**, Sache I, Laval V (2012) Détection et quantification des ascospores de *Mycosphaerella graminicola* responsables de la phase précoce des épidémies de septoriose du blé. *9e Rencontres de Phytopathologie / Mycologie*, January 16-20 2012, Aussois, France.

[P15] Bernard F, Sache I, **Suffert F**, Chelle M (2012) Temperature across scales, from phylloclimate to mesoclimate: What about foliar fungal pathogen development? *8e Congrès de la Société Française de Phytopathologie*, June 5-8 2012, Paris, France.

[P16] Vidal T, Gigot C, Girardin G, Robert C, de Vallavieille-Pope C, **Suffert F**, Huber L, Saint-Jean S (2014) Effet de l'architecture d'un couvert de blé et des caractéristiques pluviométriques sur la dispersion par éclaboussement de *Mycosphaerella graminicola* en conditions contrôlées. *10e Rencontres de Phytopathologie / Mycologie*, January 27-31 2014, Aussois, France.

[P17] Bernard F, El Kamel O, Fortineau A, Sache I, Chelle M, **Suffert F** (2014) Is the annual amplitude of temperatures a driving force for fungal pathogen population adaptation? *International Workshop HETEROCLIM*

- *The response of organisms to climate change in heterogeneous environments*, June 10-14 2014, Loches, France.

[P18] Bernard F, El Kamel O, Fortineau A, Pincebourde S, Chelle M, Sache I, **Suffert F** (2014) The development of a fungal pathogen is affected by daily fluctuations of leaf temperature. *International Workshop HETEROCLIM - The response of organisms to climate change in heterogeneous environments*, June 10-14 2014, Loches, France.

[P19] Gazeau G, Auclair C, Delestre G, **Suffert F**, Walker AS (2016) Assessing the risk of combination between MDR and specific resistance towards SDHI in *Zymoseptoria tritici*. *18th International Symposium on Modern Fungicides and Antifungal Compounds*, April 24-28 2016, Reinhardsbrunn, Allemagne.

[P20] Kerdraon L, Balesdent MH, Barret M, Laval V, **Suffert F** (2016) Characterization of the microbiome diversity in crop debris and search of potential biocontrol agents acting on *Zymoseptoria tritici* and *Leptosphaeria maculans* primary inoculum. *9th International Symposium on Septoria Diseases of Cereals*, April 3-6 2016, Paris, France.

P21] Boixel A-L, Carpentier F, Chelle M, Delestre G, Fortineau A, Gélisse S, Goyeau H, Legeay J, Marcel T, Pincebourde S, Ravigné V, Retout N, Sache I, Valade R, **Suffert F** (2017) Réponses de populations de *Zymoseptoria tritici* aux variations spatiales de deux facteurs agro-environnementaux - température et résistance variétale - et estimation de leur potentiel d'adaptation aux changements globaux. *Journées Scientifiques Annuelles du LabEx BASC*, May 2-3 2017, Paris, France.

[P22] Kerdraon L, Balesdent MH, Barret M, Laval V, **Suffert F** (2017) Microbiome diversity in crop debris and potential interactions with the fungal pathogens *Zymoseptoria tritici* and *Leptosphaeria maculans*. *12th EFPP-10th SFP Conference*, May 29 to June 2 2017, Malo-les-Bains, France.

[P23] **Suffert F** (2017) Death of the assumption that 'latent period' is fixed over the course of a plant disease epidemic. *12th EFPP-10th SFP Conference*, May 29 to June 2 2017, Malo-les-Bains, France.

[P24] Penaud A, Paumier D, Bamme B, Petiteau A, Heritier E, **Suffert F**, Valade R (2017) Epidemiology of Pasmo and *Septoria linicola* resistance in French flax cultivars. *12th EFPP-10th SFP Conference*, May 29 to June 2 20172017, Malo-les-Bains, France.

[P25] Ben Krima S, Slim A, Muller MH, **Suffert F**, Marcel T (2017) Adaptation of a phytopathogenic fungi to genetically heterogeneous host populations. *PhD Days of the SdV Doctoral School*, France.

[P26] Kerdraon, Balesdent M-H, Barret M, Laval V, **Suffert F** (2017) Dynamics of microbial community networks associated with the debris-borne wheat pathogen *Zymoseptoria tritici. International Phytobiomes Conference*, December 4-6 2018, Montpellier, France.

[P27] Kerdraon L, Balesdent M-H, Barret M, Laval V, **Suffert F** (2019) Dynamics of microbial community networks associated with the debris-borne wheat pathogen *Zymoseptoria tritici*. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[P28] Boixel A-L, Gélisse S, Marcel TC, **Suffert F** (2019) First evidence of moisture adaptation in *Zymoseptoria tritici*. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[P29] Boixel A-L, Chelle M, **Suffert F** (2019) Seasonal shifts and spatial variability of thermal adaptation in populations of *Zymoseptoria tritici* sampled over the Euro-Mediterranean region. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[P30] Ben Krima S, Slim A, Gélisse S, Delestre G, **Suffert F**, Marcel TC (2015) Comparison of genetic diversity of Zymoseptoria tritici populations on Tunisian durum wheat landraces and the modern variety Karim. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[P31] Langlands-Perry C, Cuenin M, Bergez C, Gélisse S, Ben Krima S, Barrachina C, **Suffert F**, Lapalu N, Marcel TC (2019) Genetic determinism of quantitative pathogenicity in *Zymoseptoria tritici*. *10th International Symposium on* Cereal Leaf Blights, May 22-24 2019, Dublin, Ireland.

[P32] Vidal T, Goyeau H, Berder J, **Suffert F**, Soubeyrand S, Sache I, Boixel A-L (2021) Survie de la rouille brune sur repousses de blé : quelle structure de population pathogène à l'échelle du paysage ? *Rencontres d'Ecologie des Paysages*, 11-13 octobre 2021, Rennes, France.

[P33] Boixel A-L, Le Poulennec C, Chelle M, **Suffert F** (2022) Mimicking a Septoria tritici blotch polycyclic epidemic under controlled conditions: a rain simulator-based prototype to test competitive fitness of several *Zymoseptoria tritici* strains. *International Symposium on Cereal Leaf Blights (ISCLB2022)*, May 11-13 2022, Tunis, Tunisia.

[P34] Ben Krima S, Amezrou R, Slim A, Gélisse S, Kouki H, Yahyaoui A, **Suffert F**, Ben M'Barek S, Marcel TC (2022) The genetic architecture of resistance to Septoria tritici blotch within Tunisian durum wheat landraces revealed by GWAS analysis. *International Symposium on Cereal Leaf Blights (ISCLB2022)*, May 11-13 2022, Tunis, Tunisia.

[P35] Moreau D, Ballini E, Djian-Caporalino C, Chave M, Cordeau S, Lavoir A-V, **Suffert F**, Cortesero A-M (2022) Which potential of service plants for 'multi-pest' regulation in agroecosystems? An integrative conceptual framework highlighting complementarities in mechanisms and traits. *XVII European Society for Agronomy congress*, 29 August-2 September 2022, Potsdam, Germany.

[P36] Vidal T, Ouni O, de Saint-Méloir H, Duvivier M, Gaubrie S, Heick TM, Hellin P, Kildea S, **Suffert F** (2022) Reduction of Septoria tritici blotch severity in cultivar mixtures: effect provided by a mixture varies between European sites depending on local disease severity on component cultivars in pure stand. *11e Rencontres de Phytopathologie / Mycologie*, September 12-16 2022, Aussois, France.

[P37] Bourgeois T, Prado S, **Suffert F**, Salmon S (2023) *Heteromurus nitidus* (Collembola) grazes the wheat pathogenic fungus *Zymoseptoria tritici* on infected tissues: opportunities and limitations for bioregulation. *International Congress of Plant Pathology (ICPP2023)*, August 21-25, Lyon, France.

[P38] Karisto P, **Suffert F**, Mikaberidze A (2023) Dispersal kernels are steeper than the observed gradients. *International Congress of Plant Pathology (ICPP2023)*, August 21-25, Lyon, France.

[P39] Moutier N, Baranger A, Bécu T, Ecarnot M, Enjalbert J, Flutre T, Fontaine S, Fournier E, Julier B, Le May C, Le Roux X, Neema C, Niboyet A, **Suffert F**, Vidal T (2023) Un réseau d'essais pour évaluer l'impact de la diversification intra-parcelle sur le contrôle des maladies et adventices. *Rencontre Chercheurs-Professionnels (RCP) du PPR Cultiver et Protéger Autrement*, 19 mars 2024.

PHD SUPERVISION

• **Rym Ben Slimane (2007-2010). Contributor** (co-supervisors M-O Bancal, P Bancal). "Effects of septoria leaf blotch on senescence and nitrogen fluxes during grain filling in bread wheat". Doctoral School ABIES. Defended on Decembre 15 2010.

• **Frédéric Bernard (2009-2012). Co-supervisor** (co-directors M Chelle and I Sache). "The development of a foliar fungal pathogen does react to temperature, but to which temperature?" Doctoral School ABIES. Defended on Decembre 10 2012.

• **David Morais (2011-2015). Co-supervisor** (director I Sache ; co-supervisor V Laval). "Determinants of the early epidemic stages of wheat septoria leaf blotch: quantity, efficacy and origin of primary inoculum". Doctoral School ABIES. Defended on April 2 2015.

• **Lydie Kerdraon (2015-2019). Director** (co-supervisors V Laval, M Barret and M-H Balesdent). "Microbial diversity and pathogen-microbiome interactions in crop residues: the case of *Zymoseptoria tritici* and *Leptosphaeria maculans* in a wheat-oilseed rape system". Doctoral School ABIES. Defended on May 15 2019.

• **Anne-Lise Boixel (2015-2020). Co-director** (co-director M Chelle). "Adaptive responses of foliar pathogen populations to spatio-temporal variations in temperature: from observed phenotypic patterns to eco-evolutionary insights." Doctoral School ABIES / EIR-A Agreenium. Defended on June 19 2020.

• **Safa Ben Krima (2017-2020). Co-supervisor** (director T Marcel). “Adaptation of *Zymoseptoria tritici* to genetically heterogeneous durum wheat populations from Tunisia.” Doctoral School SEVE. Defended on December 15 2020.

• **Carolina Orellana-Torrejon (2018-2022). Co-director** (co-director S Saint-Jean, co-supervisor T Vidal). “Impact of varietal mixtures on local dynamics of resistance breakdown: case of inter-epidemic transmission of a virulence recently appeared in *Zymoseptoria tritici* populations.” Doctoral School ABIES.

• **Cécilia Fontyn (2018-2022). Director** (co-supervisors H Goyeau and T Marcel) “Is aggressiveness a significant selective force for the adaptation of *Puccinia triticina* populations to the cultivated wheat landscape?” Doctoral School ABIES.

• **Chloé Papin (2023-...). Director)** " Characterising the impact of wheat cultivar mixtures on the evolution of the virulence structure of a *Zymoseptoria tritici* population" Doctoral School ABIES.

MEMBER OF PHD JURY AND COMMITTEES

• **Julie Crombez, MSc examiner.** Epidémiologie de la septoriose sur blé : premiers éléments pour la construction d’un modèle prédictif. Defended in 2007.

• **Céline Janvier, PhD examiner.** Recherche d'indicateurs de la santé des sols. Defended in 2007.

• **Rim Ben Slimane, PhD committee member** (2008-2009).

• **Christophe Gigot, PhD committee member** (2010-2011).

• **Maxime Duvivier, PhD rapporteur.** Distribution of the airborne inoculum of wheat leaf rust and septoria tritici blotch: impact on epidemics in wheat fields and implications for integrated pest management. Defended in 2015.

• **Nicolas Mariette, PhD rapporteur.** Evolution de populations de *Phytophthora infestans* en lien avec leur pouvoir pathogène et leur réponse à la température. Defended in 2016.

• **Kenny Agésilas-Lequeux, MSc examiner.** Étude d’un système de surveillance épidémiologique de la culture de la vanille en Polynésie. Defended in 2016.

• **Fabienne Legrand, PhD rapporteur.** Gestion des communautés microbiennes telluriques pour réduire l'incidence des *Fusarium toxinogènes* sur céréales à pailles et développer une stratégie de lutte biologique. Defended in 2017.

• **Maxime Garault, PhD committee member** (2017-2021).

• **Candy Abboud, PhD committee member** (2017-2020).

• **Nicolas Niko, PhD committee member** (2019-2023).

• **Paul Chretien, PhD examiner.** Caractérisation des agents phytopathogènes responsables des pertes de la filière ail. Mise au point d’une méthode de détection. Defended in 2021.

• **Antoine Vajou, PhD committee member** (2021-2023).

• **Thomas Bourgeois, PhD committee member** (2021-2023).

• **Paola Pilo, PhD rapporteur.** Detection and diversity of *Zymoseptoria tritici* and its effectors from wheat field sites. Defended in 2022.

• **Ammar Abdalrahem, PhD committee member** (2022-…).

• **Elodie Muller, PhD committee member** (2022-…).

• **Lisa Besson, PhD committee member** (2022-…).

• **Clément Plessis, PhD committee member** (2022-…).

• **Simon Laubray, PhD examiner.** Déterminants de la production d'inoculum chez *Hymenoscyphus fraxineus*, agent de la chalarose du frêne. Defended in 2023.

MEMBER OF RECRUITMENT PANELS

• **Member of external recruitment panel (IR), campaign 2019.** Ingénieur-e en analyses de données épidémiologiques. Profil IR19-SPE-2, unité INRA BioSP Avignon.

• **Chairman of external recruitment panel (IR), campaign 2020.** Ingénieu-er chargé du suivi des risques d'émergence des maladies en forêt. Profil IR20-ECOFA-1, unité INRAE IAM Nancy.

MSC STUDENT (CO)SUPERVISION

INRA traineeship: Estelle Remy (2002), Vincent Boaglio (2003), Julien Beuzelin (2003), David Delalande (2004), Adeline Picot (2007, Majed Tliha (2008), Rekah Sekar-Lecomte, David Morais (2011), Jean Legeay (2015), Carolina Orellana-Torrejon (2018), Auriane Pinton (2018), Oumaima Oumi (2020), Anaïs Fermier (2021), Younes Amara (2023), Marion Petit-Garcia (2024), Marion Sesia (2024).

AgroParistech arrangement « La recherche & moi » : Lucas Rebuffet (2016-2017), Quentin Fort (2017-2018), Lucas Pavlovic (2018-2019).

ORGANISATION OF SCIENTIFIC EVENTS

• **9th International Workshop on Plant Disease Epidemiology** [2005], Landerneau. Member of the organising committee.

• **3rd European Crop Biosecurity Workshop of the CropBioterror EU project** [2007], Paris. Organiser.

• **8e Colloque National de la Société Française de Phytopathologie (SFP)** [2012], Paris. Member of the scientific and organising committee

• **10e Rencontres de Phytopathologie-Mycologie de la SFP** [2014], Aussois. Member of the organising committee and co-chair of the *Epidemiology* session.

• **9th International Symposium on Septoria Diseases of Cereals** [2016], Paris. Co-chair of the *Epidemiology, Cultural Management and Fungicide Resistance* session.

• **2th European Foundation for Plant Pathology-10th SFP Conference** [2017], Malo-les-Bains. Member of the scientific committee and co-chair of the *Epidemiology* session.

• **10th International Symposium on Cereal Leaf Blights** [2019], Dublin. Co-chair of the *Cultural Management, Fungicide Resistance and Epidemiology* session.

• **11e Rencontres de Phytopathologie-Mycologie de la SFP** [2022], Aussois. Member of the organising committee and co-chair of the *Epidemiology* session.

• **12e Rencontres de Phytopathologie-Mycologie de la SFP** [2024], Aussois. Member of the organising committee and co-chair of the *Epidemiology* session.

MEMBER OF HCERES COMMITTEES

• *UMR 1136 Interactions Arbres / Micro-organismes (IAM)* in Nancy (2016).

• *SF 4242 Ecosystème Forestier, Agroressources, Bioprocédés et Alimentation (EFABA)* in Nancy (2016).

REFEREE REPORTS FOR SCIENTIFIC JOURNALS

• Associate Editor for *Journal of Plant Pathology* (2017-…).

• Reviewer for *Annals of Applied Biology, Biological Invasions, EPPO Bulletin, European Journal of Plant Pathology, Evolutionary Applications, Fungal Biology, Frontiers in Plant Science, Journal of Phytopathology, Journal of Plant Pathology, Plant Pathology.*

RECENT PROJECTS

• **MOBIDIV** (PPR ANR 2021-2026). Mobilizing and breeding Intra and inter-specific crop diversity for a systemic change towards pesticide-free agriculture.

• **COMBINE** (ANR 2023-2027). Combining varieties to compel the adaptation of plant pathogen populations: how to solve the efficiency - sustainability - adoption trade-off.

• **DURABLASSO** (Thèse CIFRE ARVALIS 2023-2026). Characterising the impact of wheat variety associations on the evolution of the virulence structure of a *Zymoseptoria tritici* population.

• **WHEATSECURITY** (ERA-NET SusCrop UE 2023-2026). Identification and sustainable deployment of wheat genetic diversity to enhance the resilience and security of the European food supply.

• **MYCOMIX** (SPE INRAE 2024-2026 and BIOSPHERA transverse 2024-2025). Do varietal mixtures influence the composition and structure of fungal communities in the phyllosphere and residuesphere?

• **MICROBIAL RENDEZ-VOUS** (INRAE-CSIRO linkage proposal 2024). Crop residues are an unchecked meeting place for plant pathogens that offer opportunities for the development of novel strategies for sustainable disease management.

• **SEED** (Métaprogramme INRAE SuMCrop 2021-2022). Impact of the management of durum wheat seeds by Tunisian farmers on the sustainability of disease control.

• **TREMÄ** (Métaprogramme INRAE SuMCrop 2024-2025). Tunisian-French consortium and seminar on disease resistance in field crops.

• **PROFAS** (France-Algérie 2023-2024). Promoting Saharan wheat and related know-how.

• **BLADE2025** (IVD4 2021-2025). Wheats for sustainable and ecological agriculture.

• **BASTAFUN** (SPE INRAE, 2023-2025). The genomic basis of multi-stress adaptation in a phytopathogenic fungus.

• **PHECOLLPHYT 1 and 2** (Aviv MNHN 2021-2022 and prématuration Alliance Sorbonne Université SATT Lutech 2023-2025). Use of collembola pheromones for the control of wheat fungal pathogens.

• **RUSTWATCH** (H2020 UE, 2018-2022). A European early-warning system for wheat rust diseases.

• **ROUILLENOIRE**_2.0 (FSOV 2024-2026). Anticipating the re-emergence of stem rust of wheat in France by combining epidemiosurveillance and characterisation of plant material.

• **MYCORE** (OI BASC Paris-Saclay 2022-2023). Myco-control of wild buckwheat by a naturally occurring rust.