

(1) CURRICULUM VITAE

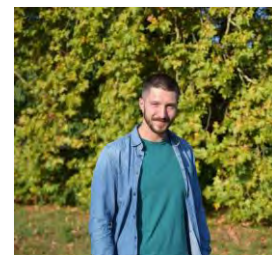
PERSONAL INFORMATION

PIERRE PÉTRIAcq (PHD, FHEA, HDR) Born March 13th 1985 (39 yo), French

University of Bordeaux, INRAE | UMR 1332 Fruit Biology and Pathology
71 Avenue Édouard Bourlaux | F-33883 | Villenave d'Ornon | France

☎ +33 5 57 12 26 90

@ pierre.petriacq@inrae.fr [Webpage](#) [ORCID](#) [ResearchGate](#) [H-index](#) [Twitter](#)



EDUCATION

2021 **HDR** Habilitation à diriger des recherches, Uni. Bordeaux, **FR** (Nov 2021)
2008 – 2011 **PhD** in Biology, French research ministry fellowship (Oct 2011, with honours), Institut de Biologie des Plantes, Uni. Paris Sud, Orsay, **FR**
Title: NAD biosynthesis in plants, PhD Supervisor: Dr Bertrand GAKIÈRE
2006 – 2008 **MSc** in Integrative Biology & Physiology, Uni. Paris 6, Paris, **FR** (with honours)

POSITIONS

From 2018 **Group leader & head of Bordeaux Metabolome^a** team (29 permanent staff), INRAE Bordeaux Nouvelle Aquitaine, **FR**
Guest research scientist, Animal & Plant Sciences Dept., Uni. Sheffield, **UK**
From 2017 **Associate Professor** in Plant biochemistry and physiology, UMR1332 (BFP), Uni. Bordeaux/INRAE, **FR**
2016 – 2017 **Group Leader** in Metabolomics (P3 Institute fellow), Uni. Sheffield, **UK**
2013 – 2016 **Postdoctoral Researcher** (Leverhulme Trust fellow), Uni. Sheffield, **UK**
2011 – 2012 **Assistant Professor**, Institut de Biologie des Plantes, Uni. Paris Sud, **FR**

MAJOR TEACHING ACTIVITIES

From 2022 **Head of MSc track PASTEL** (biochemistry) and 2 modules Bordeaux Biology AgroSciences, Uni. Bordeaux, **FR**
From 2019 **Visiting Professor** International MSc track GIP-TRIAD^b, Uni. Tsukuba, **JP**
From 2019 **Head of MSc international module IOB** (Omics & Bioinformatics) Bordeaux Biology AgroSciences, Uni. Bordeaux, **FR**

RESEARCH ACTIVITIES

• Institutional responsibilities

From 2022 **National working group** on "complete pricing and costs", INRAE, **FR**
From 2022 **Scientific board** of UMR1332 BFP, INRAE, Uni. Bordeaux, **FR**
From 2018 National **executive board** of MetaboHUB, INRAE, Uni. Bordeaux, **FR**
2018 **Baccalaureate jury president**, Lycée Max Linder, Libourne, **FR**
2017 **EU expert** in Plant metabolomics (COST action FA1405), Uni. Jaume I, **ES**

• Fellowships and awards

2023 **FAPERJ exchange programme** Rio - France, **BR/FR**
2020 **École Pratique du Management de la Recherche Agronomique** INRAE 8th promotion, **FR**
2018 – 2022 Doctoral supervision & research (PEDR) and scientific excellence (PES) awards, Uni. Bordeaux, **FR**
2016 – 2017 **Independent research fellow**, P3 Institute, Animal & Plant Sciences Dept., Uni. Sheffield, **UK**
2015 **Fellow of the Higher Education Academy**, Uni. Sheffield, **UK**
2013 – 2016 **Postdoctoral research fellow**, Leverhulme Trust, Uni. Sheffield, **UK**
2013 **Qualifications** for Associate Professorship (CNU 64, 66), Uni. Paris Sud, **FR**

• Contribution to early-stage careers

Completed: 1 postdoc, 8 PhD, 15 MSc – Ongoing: 3 postdoc, 2 PhD, 1 MSc.

^a Metabolomics facility (<https://metabolome.u-bordeaux.fr/>) part of the MetaboHUB research infrastructure

^b International Joint Degree Master's Program in Agro-Biomedical Science in Food and Health (<http://www.gip.tsukuba.ac.jp/english/>)

Out of 8 (co)supervised PhD students and 1 postdoc, 3 are now associate/assistant professors (in Indonesia, France and the USA) and 5 are postdoctoral researchers (in Germany, the UK and Spain).

- **Editorial commitments**

From 2021 **Senior Associate Editor**, *Front Plant Sci*

2020 – 2021 **Special Issue Editor**, *Metabolites*: [Fruit Metabolism and Metabolomics](#), [Metabolomics in Plant Defence](#)

Volume Editor, *Adv Bot Research* ([Plant Metabolomics in Full Swing](#))

From 2018 **Guest Associate Editor**, *Front Plant Sci & Metabolites*

- **Journal reviews**

From 2013 **Review Editor**, *Nature Comm*, *Plant Physiol*, *Plant J*, *New Phytol*, *J Ex Bot*, *Front Plant Sci*, *Biochemical J*, *Sci. Reports*, *Plant and Soil*, *PCE...*

On average, 10 papers reviewed per year.

- **Funding agency reviews**

From 2013 **Grant evaluator**, ANR & LabEx (FR), DFG (DE), BBSRC (UK), NSC (PL), FWF (AT). **On average, 5 grants evaluated per year.**

- **Jury member**

2022 **Recruitment** for 2 positions (engineer, technician) in analytical chemistry (host research unit BFP), INRAE, FR

From 2020 **PhD committee** (4 Uni. Bordeaux, 1 Uni. Rennes 1; 3 Tutoring in Bordeaux)

From 2020 **PhD defence** for 11 doctorates: 9 in France, 2 in Spain

2019 **Jury** for *Life and Health Sciences* Doctoral School 154, Uni. Bordeaux, FR

- **Selected memberships of scientific societies**

2023 – 2027 **Vice-President**, French-speaking metabolomics and fluxomics network [RFME](#), FR/BE/CH/LU

From 2018 **Steering committee**, Network "*Plant metabolomics*" INRAE, BAP division, FR

2013 – 2017 **Member**, Metabolomics Society, American Society of Plant Biology, Society of Experimental Botany, British Mass Spectrometry Society

- **Selection of funding**

I have been successful in more than 20 research and 10 instrument grants (22.1 M€ for research projects, 8.3 M€ for instruments) from regional to (inter)national calls as participant, WP leader or coordinator. Here are some recent fundings obtained.

Research projects (Total budget in black, [dedicated funding in blue](#))

2024-28 **FruitDiv Horizon EU** (Fruit tree wild diversity, **6M €**) [Task leader \(600k €\)](#)

2023-27 **SelectVia ANR LabCom** (**350k €**) [Task leader](#)

2022-26 **DemoniaCo ANR** (Metal tolerance of green microalga, **468k €**) [WP leader \(68k €\)](#)

2021-25 **PARASOL ANR** (Heat stress response of microvine, **526k €**) [WP leader \(32k €\)](#)

2020-24 **GLOMICAVE H2020** (Global Omic Data Integration, **6.3M €**) [WP leader \(428k €\)](#)

2020-25 **MetaboHUB2.0 INBS** (Infrastructure **2.9M €**) [WP co-leader \(340k €\)](#)

Investment projects in structuring equipment

2021-27 **CPER OMICS/Biomarqueurs** (**7.2M €**) [Local coordinator \(2.6M €\)](#)

2021-25 **ANR Equipex+ MetEx+** (INRAE, **7.1M €**) [Local coordinator \(2.1M €\)](#)

2020 **PYRGA** (Pyrolyse-GC-MS) (GIS IBiSA & DISC INRAE, **180k €**) [Coordinator](#)

- **Major international collaborations**

Redox signalling: L Lejay (1 grant); B Gakière (11 papers) FR; [A Fernie](#) (3 papers) DE; S Hashida (1 paper), JP; C Jonak (1 EU grant, AT

Metabolomics: A Bouchereau & G Marti (1 grant) FR; [G Tcherkez](#) (7 papers, 1 grant) AU; [V Flors](#) (3 papers, 1 student); [N Canela](#) (1 EU grant) ES

Defence & hormonal signalling: E Luna Diez (5 papers, 3 students) UK; A Lopez ES

Plant-soil interactions: [L Wingate](#) (1 PhD, 1 MSc, 1 EU grant) FR; A Williams, [J Ton](#), S Rolfe (10 papers) UK; C Pieterse, [R Berendsen](#) (1 paper) NL; [M Semchenko](#) (1 EU grant) EE

Ecophysiology: R Barillot (1 project) FR

(2) PERSONAL BIBLIOGRAPHY

RESEARCH IN NUMBERS

H index: 23 (March 2024) **Invited talks:** 30 **Total citations:** 1864 (March 2024)

Highly cited: 10 **Open access:** 36

I have published **48 scientific articles and reviews** (34 since 2017 as associate professor), of which 8 as first author, 11 as last author, and 23 as corresponding author, in a range of international peer-reviewed journals, including *Nature Communications*, *Nature Chemical Biology*, *ISME Journal*, *New Phytologist*, *Plant Cell*, *Plant Physiology*, *Plant Journal* and *Journal of Experimental Botany* among others. I have also edited and contributed to 2 book volumes and 5 chapters in metabolomics and plant biology.

A. PEER-REVIEWED SCIENTIFIC ARTICLES AND REVIEWS

48 publications listed in chronological order (34 since recruitment in 2017): first author (8), last author (11), corresponding* (23). Underlined names indicate student/postdoc (co)supervision. For your information, the impact factor of the journals is shown *in red*.

1. Dussarrat T, Nilo-Poyanco R, Moyano TC, Prigent S, Jeffers TL, Díaz FP, Decros G, Audi L, Sondervan VM, Shen B, Araus V, Rolin D, Shasha D, Coruzzi GM, Gibon Y, Latorre C, **Pétriacq P***, Gutiérrez RA* (2024) Phylogenetically diverse wild plant species use common biochemical strategies to thrive in the Atacama Desert. *J Exp Bot.* (6.9) DOI: 10.1093/jxb/erae117
2. Baldet P, Mori K, Decros G, Beauvoit B, Colombié S, Prigent S, **Pétriacq P**, Gibon Y (2024) Multi-regulated GDP-l-galactose phosphorylase calls the tune in ascorbate biosynthesis. *J Ex Bot* (6.9) DOI: 10.1093/jxb/erae032
3. Lavoignat M, Cassan C, **Pétriacq P**, Gibon Y, Heumez E, Duque C, Momont P, Rincant R, Blancon J, Ravel C, Le Gouis J (2024) Different wheat loci are associated to heritable free asparagine content in grain grown under different water and nitrogen availability. *Theor Appl Genet* 137: 46
4. Díaz F.P, Dussarrat T, Carrasco-Puga G, Colombié S, Prigent S, Decros G, Bernillon S, Cassan C, Flandin A, Guerrero PC, Gibon Y, Rolin D, Cavieres LA, **Pétriacq P***, Latorre C*, Gutiérrez RA* (2024) Ecological and metabolic implications of the nurse effect of *Maihuenuopsis camachoii* in the Atacama Desert. *New Phytol.* (9.4) DOI: 10.1111/nph.19415nph.19415
5. Hajjar G, Barros Santos M, Bertrand-Michel J, Canlet C, Castelli F, Creusot C, Dechaumet S, Diémé B, Giacomoni F, Giraudeau P, Guitton Y, Thévenot E, Tremblay-Franco M, Junot C, Jourdan F, Fenaille F, Comte B*, **Pétriacq P***, Pujos-Guillot E* (2023) Scaling-up metabolomics: Current state and perspectives. *TrAC.* (14.2) **167**: 117225 DOI: 10.1016/j.trac.2023.117225
6. Decros G*, Dussarrat T, Baldet P, Cassan C, Cabasson C, Dieuaide-Noubhani M, Destailleux A, Flandin A, Prigent S, Mori K, Colombié S, Jorly J, Gibon Y, Beauvoit B, **Pétriacq P*** (2023) Enzyme-based kinetic modelling of ASC-GSH cycle during tomato fruit development reveals the importance of reducing power and ROS availability. *New Phytol.* (9.4) DOI: 10.1111/nph.19160

7. Dollinger J, **Pétriaccq P**, Flandin A, Samouelian A (2023) [Soil metabolomics: A powerful tool for predicting and specifying pesticide sorption](#). *Chemosphere*. **337**: 139302 (8.8) DOI: 10.1016/j.chemosphere.2023.139302
8. Bournonville C, Mori K, Deslous P, Decros G, Blomeier T, Mauxion J-P, Jorly J, Gadin S, Cassan C, Maucourt M, Just D, Brès C, Rothan C, Ferrand C, Fernandez-Lochu L, Bataille L, Miura K, Beven L, Zurbriggen M, **Pétriaccq P**, Gibon Y, Baldet P (2023) [Blue light promotes ascorbate synthesis by deactivating the PAS/LOV photoreceptor that inhibits GDP-L-galactose phosphorylase](#). *The Plant Cell*. **35**: 2615-2634 (12.08) DOI: 10.1093/plcell/koad108
9. Vismans G, van Bentum S, Spooren J, Song Y, Goossens P, Valls J, Snoek BL, Thiombiano B, Schilder M, Dong L, Bouwmeester HJ, **Pétriaccq P**, Pieterse CMJ, Bakker PAHM, Berendsen RL (2022) [Coumarin biosynthesis genes are required after foliar pathogen infection for the creation of a microbial soil-borne legacy that primes plants for SA-dependent defences](#). *Sci Rep*. **12**: 22473 (4.9) DOI: 10.1038/s41598-022-26551-x
10. Martins J, **Pétriaccq P**, Flandin A, Gomez-Cadenas A, Monteiro P, Pinto GC, Canhoto JM (2022) [Genotype determines *Arbutus unedo* L. physiological and metabolomic responses to drought and recovery](#). *Front Plant Sci*. (6.6) DOI: 10.3389/fpls.2022.1011542
11. Poucet T, Beauvoit B, González-Moro MB, Cabasson C, **Pétriaccq P**, Flandin A, Gibon Y, Marino D, Dieuaide-Noubhani M (2022) [Impaired cell growth in ammonium stress explained by modelling the energy cost of vacuole expansion in tomato leaves](#). *Plant J*. **92**: 147 (7.1) DOI: 10.1111/tpj.15991
12. Paulhe N, Canlet C, Damont AL, Peyriga L, Durand S, Deborde C, Alves S, Bernillon S, Berton T, Bir R, Bouville A, Cahoreau E, Centeno D, Costantino R, Debrauwer L, Delabrière A, Duperier C, Emery S, Flandin A, Hohenester U, Jacob D, Joly C, Jousse C, Lagree M, Lamari N, Lefebvre M, Lopez-Piffet C, Lyan B, Maucourt M, Migne C, Olivier MF, Rathahao-Paris E, **Petriaccq P**, Pinelli J, Roch L, Roger P, Roques S, Tabet JC, Tremblay-Franco M, Traïkia M, Warnet A, Zhendre V, Rolin D, Jourdan F, Thévenot E, Moing A, Jamin E, Fenaille F, Junot C, Pujos-Guillot E, Giacomoni F (2022) [PeakForest: a multi-platform digital infrastructure for interoperable metabolite spectral data and metadata management](#). *Metabolomics*. **18**: 40 (4.3) DOI: 10.1007/s11306-022-01899-3
13. Dussarrat T, Prigent S, Latorre C, Bernillon S, Flandin A, Díaz F P, Cassan C, Van Delft P, Jacob D, Varala K, Joubes J, Gibon Y, Rolin D, Gutiérrez R A*, **Pétriaccq P*** (2022) [Predictive metabolomics of multiple Atacama plant species unveils a core set of generic metabolites for extreme climate resilience](#). *New Phytol*. **234**: 1614 (10.1) DOI: 10.1111/nph.18095
14. Destailleur A, Poucet T, Cabasson C, Alonso A P, Cocuron JC, Larbat R, Vercambre G, Colombié S, **Pétriaccq P**, Andrieu MH, Beauvoit B, Gibon Y, Dieuaide-Noubhani M (2021) [The Evolution of Leaf Function during Development Is Reflected in Profound Changes in](#)

the Metabolic Composition of the Vacuole. *Metabolites*. **11**: 648 (4.9) DOI: 10.3390/metabo11120848

15. Allwood J W*, Williams A, Uthe H, van Dam N M, Mur L A J , Grant M R, **Pétriaccq P*** (2021) Unravelling the plant responses to stress – the importance of targeted and untargeted metabolomics. *Metabolites*. **11**: 558 (4.9) DOI: 10.3390/metabo11080558
16. Groppi A , Liu S, Cornille A, Decroocq S, Trang Bui Q, Tricon D, Cruaud C, Arribat S, Belser C, Marande W, Salse S, Huneau C, Rodde N, Rhalloussi W, Cauet S, Istace B, Denis E, Carrère S, Audergon J.M, Roch G, Lambert P, Zhebentyayeva T, Liu W.S, Bouchez O, Lopez-Roques C, Serre R.F, Debuchy R, Tran J, Wincker P, Chen X, **Pétriaccq P**, Barre A, Nikolski M, Aury J.M, Abbott A.G, Giraud T, Decroocq V (2021) Population genomics of apricots unravels domestication history and adaptive events. *Nat Commun*. **12**: 3956 (14.9) DOI: 10.1038/s41467-021-24283-6
17. Deslous P, Bournonville C, Decros G, Okabe Y, Mauxion J P, Jorly J, Gadin S, Bres C, Ferrand C, Prigent S, Ariizumi T, Ezura H, Hernould M, Mori K, Rothan C, **Pétriaccq P**, Gibon Y, and Baldet P (2021) Over-production of Ascorbic Acid Impairs Pollen Fertility in Tomato Mutants. *J Ex Bot*. **72**: 3091 (5.9) DOI: 10.1093/jxb/erab040
18. Dussarrat T, Decros G, Diaz F, Gibon Y, Latorre C, Rolin D, Gutierrez R, **Pétriaccq P*** (2021) Another tale from the harsh world: how plants adapt to extreme environments. *Annual Plant Review online*. **4**. DOI: 10.1002/9781119312994.apr0758 (Invited review)
19. Moing A, **Pétriaccq P**, Osorio S (2020) Special Issue on “Fruit Metabolism and Metabolomics”. *Metabolites*. **10**: 230 (4.0) DOI: 10.3390/metabo10060230
20. Mageroy M, Wilkinson S, Tengs T, Cross H, Almvik M, **Pétriaccq P**, Vivian-Smith A, Zhao T, Fossdal C, Krokene P (2020) Molecular underpinnings of methyl jasmonate-induced resistance in Norway spruce. *Plant Cell Environ*. DOI: 10.1111/pce.13774 (5.6) DOI: 10.1111/pce.13774
21. Luna E, Flandin A, Cassan C, Prigent S, Chevanne C, Kadiri CF, Gibon Y, **Pétriaccq P*** (2020) Metabolomics to exploit the primed immune system of tomato fruit. *Metabolites*. **11**: 146 (4.0) DOI: 10.3390/metabo10030096
22. Fernie A.R, Hashida S, Yoshimura K, Gakière B, Mou Z, **Pétriaccq P*** (2020) Editorial: NAD Metabolism and Signaling in Plants. *Front Plant Sci*. **11**: 146 (4.4) DOI: 10.3389/fpls.2020.00146
23. Decros G, Beauvoit B, Colombié S, Cabasson C, Bernillon S, Arrivault S, Guenther M, Belouah I, Prigent S, Baldet P, Gibon Y, **Pétriaccq P*** (2019b) Regulation of Pyridine Nucleotide Metabolism During Tomato Fruit Development Through Transcript and Protein Profiling. *Front Plant Sci*. **10**: 1201 (4.4) DOI: 10.3389/fpls.2019.01201

24. Decros G, Baldet P, Beauvoit B, Stevens R, Flandin A, Colombié S, Gibon Y, **Pétriacq P*** (2019a) [Get the Balance Right: ROS Homeostasis and Redox Signalling in Fruit](#). *Front Plant Sci.* **10**: 1091 (4.4) DOI: 10.3389/fpls.2019.01091

25. Williams A, Cotton T.E.A, Ton J, **Pétriacq P*** (2019) [An Adjustable Protocol to Analyze Chemical Profiles of Non-sterile Rhizosphere Soil](#). *Bio-protocol*, **9**. DOI: 10.21769/BioProtoc.3245. (Invited technical advance)

26. Belouah I, Nazaret C, **Pétriacq P**, Prigent S, Bénard C, Mengin V, Blein-Nicolas M, Denton AK, Balliau T, Augé S, Bouchez O, Mazat JP, Stitt M, Usadel B, Zivy M, Beauvoit B, Gibon Y, Colombié S (2019) [Modeling Protein Destiny in Developing Fruit](#). *Plant Physiol.* **180**: 1709 (6.3) DOI: 10.1104/pp.19.00086

27. Cotton T.E.A, **Pétriacq P**, Cameron D.D, Meselmani M.A, Schwarzenbacher R, Rolfe S.A, Ton J (2019) [Metabolic regulation of the maize rhizobiome by benzoxazinoids](#). *ISME J.* **13**: 1647 (9.4) DOI: 10.1038/s41396-019-0375-2

28. Williams A, **Pétriacq P**, Beerling D.J, Cotton T.E.A, Ton J (2018) [Impacts of Atmospheric CO₂ and Soil Nutritional Value on Plant Responses to Rhizosphere Colonization by Soil Bacteria](#). *Front Plant Sci.* **9**: 1493 (4.1) DOI: 10.3389/fpls.2018.01493

29. **Pétriacq P***, López A, Luna E (2018) [Fruit Decay to Diseases: Can Induced Resistance and Priming Help?](#) *Plants* **7**: 77 (2.6) DOI: 10.3390/plants7040077

30. Gakière B, Hao J, de Bont L, **Pétriacq P**, Nunes-nesi A, Fernie A.R (2018) [NAD⁺ Biosynthesis and Signalling in Plants](#). *Critical Reviews in Plant Sciences Sci.* **37**: 259 (6.2) DOI: 10.1080/07352689.2018.1505591

31. Hao J, **Pétriacq P**, de Bont L, Hodges M, Gakière B (2018) [Characterization of L-aspartate oxidase from *Arabidopsis thaliana*](#). *Plant Sci.* **271**: 133 (3.9) DOI: 10.1016/j.plantsci.2018.03.016

32. Buswell W, Schwarzenbacher R, Luna E, Sellwood, M, Chen B, Flors V, **Pétriacq P**, Ton J (2018) [Chemical priming of immunity without costs to plant growth](#). *New Phytol* **218**: 1205 (7.3) DOI: 10.1111/nph.15062

33. Gakière B, Fernie A.R, **Pétriacq P*** (2018) [More to NAD⁺ than meet the eye: a regulator of metabolic pools and gene expression in *Arabidopsis*](#). *Free Radic. Biol. Med* (5.7) DOI: 10.1016/j.freeradbiomed.2018.01.003

34. Williams A, **Pétriacq P**, Schwarzenbacher R, Beerling D.J, Ton J (2018) [Mechanisms of glacial-to-future atmospheric CO₂ effects on plant immunity](#). *New Phytol* **218**: 752 (7.3) DOI: 10.1111/nph.15018

35. Wilkinson W, Pastor P, Paplauskas S, **Pétriaccq P**, Luna-Diez E (2018) Long-lasting β -aminobutyric acid-induced resistance protects tomato fruit against *Botrytis cinerea*. *Plant Pathology* **67**: 30 (2.5) DOI: 10.1111/ppa.12725
36. Williams A, Hao J, Meselmani M.A, De Paepe R, Gakière B, **Pétriaccq P*** (2017) Mitochondrial complex I is important for plant tolerance to fungal biotic stress. *Annals Eco. Env. Sci.* **1**: 16
37. **Pétriaccq P***, Williams A, Cotton T.E.A, McFarlane A, Rolfe S.A, Ton J (2017b) Metabolite profiling of non-sterile rhizosphere soil. *Plant J.* **92**: 147 (5.8) DOI: 10.1111/tpj.13639
38. Yahaya N, **Pétriaccq P**, Burrell M, Walker H, Malinowski R, Rolfe S.A (2017) Changes of metabolites status in plant pathogen interactions. *Adv. Sci. Lett.* **23**: 4623 (1.3) DOI: 10.1166/asl.2017.8947
39. Van Gijsegem F, Pédrón J, Patrit O, Simond-Côte E, Maia-Grondard A, **Pétriaccq P**, Gonzalez R, Blottière L, Kraepiel Y (2017) Manipulation of ABA content in *Arabidopsis thaliana* modifies sensitivity and oxidative stress response to *Dickeya dadantii* and influences peroxidase activity. *Front. Plant Sci.* **8**: 456 (3.6) DOI: 10.3389/fpls.2017.00456
40. **Pétriaccq P**, de Bont L, Genestout L, Hao J, Laureau C, Florez-Sarasa I, Rzigui T, Queval G, Gilard F, Mauve C, Guérard F, Lamothe-Sibold M, Marion J, Fresneau C, Brown SC, Danon A, Krieger-Liszkay A, Berthomé R, Ribas-Carbo M, Tcherkez G, Cornic G, Pineau B, Gakière B, De Paepe R (2017a) Photoperiod affects the phenotype of mitochondrial complex I mutants. *Plant Physiol.* **173**: 434 (5.9) DOI: DOI: 10.1104/pp.16.01484
41. **Pétriaccq P***, Tcherkez G, Gakière B (2016c) Pyridine nucleotides induce changes in cytosolic pools of calcium in *Arabidopsis*. *Plant Sign. Behav.* **11**(11): e1249082 (1.6) DOI: 10.1080/15592324.2016.1249082
42. **Pétriaccq P***, Ton J, Patrit O, Tcherkez G, Gakière B (2016b) NAD acts as an integral regulator of multiple defense layers. *Plant Physiol.* **172**: 1465-1479 (appears in December 2016 edition of *Hot-off-the-press* from BMSS mag <http://www.bmss.org.uk/m-matters.shtml>)^c (6.5) DOI: 10.1104/pp.16.00780
43. **Pétriaccq P**, Stassen J.H.M, Ton J (2016a) Spore density determines infection strategy by the plant-pathogenic fungus *Plectosphaerella cucumerina*. *Plant Physiol.* **170**: 2325 (appears in April 2016 edition of *Hot-off-the-press* from BMSS mag <http://www.bmss.org.uk/m-matters.shtml>) (6.5) DOI: 10.1104/pp.15.00551

^c Comme membre de la *British Mass Spectrometry Society* (BMSS), j'ai pu valoriser deux de mes publications dans le magazine de la société (Pétriaccq et al., 2016a ; 2016b), ce qui m'a permis de gagner en visibilité quant à mes thématiques scientifiques, mais surtout techniques (MALDI-MS et LCMS non-ciblée).

44. Luna E, van Hulten M, Zhang Y, Berkowitz O, López A, **Pétriacq P**, Sellwood M.A, Chen B, Burrell M, van de Meene A, Pieterse CM, Flors V, Ton J (2014) [Plant perception of \$\beta\$ -aminobutyric acid is mediated by an aspartyl-tRNA synthetase](#). *Nat Chem Biol.* **10**(6): 450 (13.0) DOI: 10.1038/nchembio.1520
45. **Pétriacq P***, de Bont L, Tcherkez G, Gakière B (2013) [NAD: not just a pawn on the board of plant-pathogen interactions](#). *Plant Sign. Behav.* **8**(1): e22477 (1.6) DOI: 10.4161/psb.22477
46. **Pétriacq P***, de Bont L, Hager J, Didierlaurent L, Mauve C, Guérard F, Noctor G, Pelletier S, Renou J.P, Tcherkez G, Gakière B (2012) [Inducible NAD overproduction in *Arabidopsis* alters metabolic pools and gene expression correlated with increased salicylate content and resistance to *Pst-AvrRpm1*](#). *Plant J.* **70**: 650 (6.6) DOI: 10.1111/j.1365-313X.2012.04920.x
47. Djebbar R, Rzigui T, **Pétriacq P**, Mauve C, Priault P, Fresneau C, De Paepe M, Florez-Sarasa I, Benhassaine-Kesri G, Streb P, Gakière B, Cornic G, De Paepe R (2012) [Respiratory complex I deficiency induces drought tolerance by impacting leaf stomatal and hydraulic conductances](#). *Planta* **235**: 603 (3.0) DOI: 10.1007/s00425-011-1524-7
48. Guérard F, **Pétriacq P**, Gakière B, Tcherkez G (2011) [Liquid chromatography/time-of-flight mass spectrometry for the analysis of plant samples: a method for simultaneous screening of common cofactors or nucleotides and application to an engineered plant line](#). *Plant Physiol Biochem.* **9**: 1117 (2.8) DOI: 10.1016/j.plaphy.2011.06.003

B. BOOK CHAPTERS (5)

1. Guibert N, Saint Jean M, Prigent-Comabret C, Deogracia JM, Cabasson C, **Pétriacq P*** (2022) [Biological controls in horticulture](#). *SCIENCES ISTE book series*. (2022) DOI: 10.1002/9781394188277.ch2
2. Rolin D, Bennetau-Pelissero C, Tetali S, **Pétriacq P*** (2021) [When dietary supplements meet metabolomics: a fast-evolving field](#). *Advances in Botanical Research series*. **Vol 100** DOI: 10.1016/bs.abr.2021.01.009
3. Williams A, Gamir J, Gravot A, **Pétriacq P*** (2020) [Untangling plant immune responses through metabolomics](#). *Advances in Botanical Research series*. **Vol 98** DOI: 10.1016/bs.abr.2020.09.017
4. Fernandez O, Millet E J, Rincenc R, Prigent S, **Pétriacq P**, Gibon Y (2020) [Plant metabolomics and breeding](#). *Advances in Botanical Research series*. **Vol 98** DOI: 10.1016/bs.abr.2020.09.020

5. Allwood J W, Gibon Y, Osorio S, Araújo W L, Vallarino J G, **Pétriacq P**, Moing A (2020) [Developmental metabolomics to decipher and improve fleshy fruit quality](#). *Advances in Botanical Research series*. Vol 98 DOI: 10.1016/bs.abr.2020.09.016

C. BOOK VOLUMES (2)

1. **Pétriacq P**, Bouchereau A (Eds.) (2021) [Plant Metabolomics in Full Swing](#). *Advances in Botanical Research series*. Vol 98, Academic Press, 1st edition, ISBN: 978-0-12821-688-0
2. Moing A, Osorio S, **Pétriacq P** (Eds.) (2020) [Fruit Metabolism and Metabolomics](#). *Metabolites*. MDPI Books, ISBN: 978-3-03943-014-7

D. INVITED PRESENTATIONS (33)

To (inter)national conferences (17) :

- | | |
|------|--|
| 2024 | Pétriacq P . Metabolome modelling to decipher plant performance . Symposium IJPB "Plant Modeling: opportunities and challenges", Versailles, FR |
| 2023 | Pétriacq P , Wingate L. Developing soil metabolite modelling to predict plant-mycorrhizal interactions and soil community function . General Assembly GPR BPS, Talence, FR |
| 2023 | Pétriacq P , Fouillen L. Bordeaux Metabolome facility: metabolomics & lipidomics devoted to plant sciences . 50 th birthday of LBM lab, Talence, FR |
| 2023 | Pétriacq P . Bordeaux Metabolome: high throughput metabolomics to study plant performance . General Assembly BRC4Plants, Auzeville, FR |
| 2022 | Pétriacq P . Predictive metabolomics of multiple Atacama plant species unveils a core set of generic metabolites for extreme climate resilience . 3rd Iberoamerican Conference on Mass Spectrometry, Rio de Janeiro, BR |
| 2022 | Pétriacq P . Predictive metabolomics of multiple Atacama plant species unveils a core set of generic metabolites for extreme climate resilience . Webinar RFMF (visio), FR |
| 2022 | Pétriacq P . La métabolomique pour l'étude des compléments alimentaires . Conference on Research and Innovation in Food Supplements. Bordeaux, FR |
| 2022 | Pétriacq P . Predictive metabolomics of multiple Atacama plant species unveils a core set of generic metabolites for extreme climate resilience . Scientific days MetaToul. Saint Cyprien, FR |
| 2022 | Pétriacq P . Metabolomics at Bordeaux Metabolome . Consortium Biocontrols. Reims, FR |
| 2021 | Pétriacq P . Predictive metabolomics for the study of plant performance: the case of plant adaptation to the Atacama desert . SPOMICS days, IPS2 (visio), FR |
| 2019 | Pétriacq P , Bouchereau A. Ressources, organisation et orientations nationales de la métabolomique végétale dans le secteur agronomique . Scientific Days of BAP Division, Giens, FR |
| 2019 | Pétriacq P , Fouillen J, Valls J. Metabolomics and plant breeding at MetaboHUB-Bordeaux . 7th Scientific days MetaboHUB, Bordeaux, FR |
| 2018 | Pétriacq P , Gibon Y, Deborde C, Moing A. Plant metabolomics to decipher plant performance through biomarker discovery . French-German Procopé project on plant metabolomics, Halle, DE |

- 2018 **Pétriacq P**, Deborde C, Gibon Y, Bouchereau A, Moing A. [Plant Biology and Breeding Division](#). French-German Procope project on plant metabolomics, Halle, DE
- 2018 **Pétriacq P**, Moing A. [Proof of concept about plant phenotyping for breeding](#). 6èmes Journées Scientifiques Internationales MetaboHUB, Saint Raphaël, FR
- 2015 **Pétriacq P**, Stassen JHM, Ton J. [Spore density determines infection strategy by the plant-pathogenic fungus *Plectosphaerella cucumerina*](#). SEB meeting, Prague, CZ
- 2011 **Pétriacq P**, de Bont L, Hager J, Didierlaurent L, Mauve C, Guérard F, Noctor G, Pelletier S, Renou JP, Tcherkez G, Gakière B. [Inducible NAD overproduction in *Arabidopsis* alters metabolic pools and gene expression correlated with increased salicylate content and resistance to *Pst-AvrRpm1*](#). 10th Plant-Bacteria Meeting, Aussois, FR

To research institutes (16):

- 2023 **Pétriacq P**. [Artificial intelligence in life sciences](#). Invitation Ferreira M. Universidade Federal do Estado do Rio de Janeiro, Rio de Janeiro, BR
- 2023 **Pétriacq P**. [Metabolome modelling to investigate plant performance](#). Invitation Louis-Valentin Meteignier. PHIM Montpellier (visio), FR
- 2023 **Pétriacq P**. [Bordeaux Metabolome: metabolome modelling to investigate plant performance](#). Invitation Carassou L & Creusot N. EABX seminars, Cestas, FR
- 2022 **Pétriacq P**. [Metabolomics for the study of plant performance](#). Invitation Ferreira M. Universidade Federal do Estado do Rio de Janeiro, Rio de Janeiro, BR
- 2020 **Pétriacq P**. [Metabolomics for the study of plant performance](#). Invitation Lopez A. Centro Nacional de Biotecnologia, Madrid, ES
- 2019 **Pétriacq P**. [Introduction to redox regulations in plants](#). Invitation Kumagai Y. Université de Tsukuba, Tsukuba, JP
- 2019 **Pétriacq P**. [Plant metabolomics to decipher plant performance through biomarker discovery](#). CSIR-Indian Institute of Chemical Technology, Hyderabad, IN
- 2019 **Pétriacq P**. [Plant metabolomics at Bordeaux Metabolome Facility](#). Université d'Hyderabad, Hyderabad, IN
- 2017 **Pétriacq P**. [NAD, a regulator of immune responses](#). Invitation Gibon Y. INRA Bordeaux, FR
- 2017 **Pétriacq P**, Williams A, Cotton T.E.A, McFarlane A, Rolfe S.A, Ton J. [Comprehensive metabolic profiling of non-sterile rhizosphere soil](#). ADAS, High Mowthorpe, UK
- 2015 **Pétriacq P**, Stassen JHM, Ton J. (2015) [Spore density determines infection strategy by the plant-pathogenic fungus *Plectosphaerella cucumerina*](#). Invitation Flors V. Uni. Jaume I, Castelló de la Plana, ES
- 2013 **Pétriacq P**, Gakière B. (2013) [NAD signalling in plant-pathogen interactions](#). Invitation Ton J. Uni. of Sheffield, Sheffield, UK
- 2012 **Pétriacq P**. (2012) [NAD: not just a pawn on the board of plant-pathogen interactions](#). Invitation Jenkins G. Uni. of Glasgow, Glasgow, UK
- 2012 **Pétriacq P**. (2012) [NAD: not just a pawn on the board of plant-pathogen interactions](#). Invitation Grant M. Uni. of Exeter, Exeter, UK
- 2012 **Pétriacq P**, Gakière B. (2012) [La signalisation NAD dans les réactions de défense des plantes](#). Invitation Expert D. AgroParisTech, Paris, FR
- 2012 **Pétriacq P**. (2012) [NAD biosynthesis in plants](#). Invitation Coruzzi G. New York University, New York, US

(3) DESCRIPTION OF TEACHING ACTIVITIES, EDUCATIONAL AND ADMINISTRATIVE RESPONSIBILITIES

Teaching activities during the last 5 years

My teaching activities are based on my areas of expertise, namely **plant (eco)physiology** and **biochemistry**, for which I was qualified in 2013 (CNU 64 and 66). In addition, outside the strict framework of these disciplines, I teach open areas such as **biostatistics** and **bioinformatics**, and even participate in teaching at the **Pharmacy** department.

Thanks to my post-doctoral experience abroad, I am strongly involved in the **internationalisation of the Bachelor and Master teaching**. I teach lectures and integrated courses, tutorials and practical work, and supervise several French and international students (see details below). I am involved in various collective missions in life sciences education at the University of Bordeaux (and Tsukuba and Taiwan in Asia), and design and/or apply **innovative teaching methods** such as **flipped learning** and **MOOCs** (Massive Open Online Courses).

On average, my teaching service is 203 hours TD equivalent (between 196 and 288) during the last 5 years. In other institutions and countries, I am involved in **teaching metabolomics to international Master students in Tsukuba (JP) and Taiwan (TW)**, which represents about 20 hours of teaching, and **in Brasil due to recent academic exchange** (30 jours).

BRIEF SUMMARY OF TEACHING & TRAINING ACTIVITIES

- 2023 **Academic exchange programme FAPERJ** (Rio-France), 30 days, **BR**
- 2022 - 2027^d **Co-head of Master programme PASTEL Bordeaux Biology AgroSciences (B2AS)** *Plantes et molécules d'intérêt: caractérisation et valorisation*, Uni. Bordeaux, **FR**
- Co-head of M1 module Valuable molecules from plants**, Uni. Bordeaux, **FR**
- Head of B2AS M2 module Advanced metabolomics**, Uni. Bordeaux, **FR**
- Since 2019 **WP leader of the Teaching task of the WP6 Services of MetaboHUB2.0**
Implementation of 2 MOOCs
- Since 2019 **Head of international AgroBioMed M2 module Integrative Unit with Omics and Bioinformatics**, Uni. Bordeaux, **FR/JP/TW**
- 2019 **Head of Enrollment management** for [GIP-TRIAD](#) program
- Since 2019 **Visiting Professor** for [GIP-TRIAD](#) program, Uni. Tsukuba, **JP**
- Since 2017 **Associate Professor** – BSc and MSc in Plant Biology, Biochemistry, Physiology & Statistics, Uni. Bordeaux/ Uni. Tsukuba/ National Taiwan Uni (203 h/year on average), **FR/JP/TW**
- 2013 – 2016 **Guest Lecturer**, BSc in Biology, Uni. Sheffield (31 h), **FR**
- 2012 – 2013 **Assistant Professor**, BSc in Biology, Uni. Paris-Sud (101 h), **FR**
- 2008 – 2011 **Teaching Assistant**, BSc in Biology, Uni. Paris-Sud (217 h), **FR**

SUPERVISION AND COSUPERVISION OF STUDENTS AND DOCTORAL FELLOWS

Co-publications with the students are indicated into brackets.

Since 2017: 4 PhD, 7 Master 2, 6 Master 1 and 4 Licence 3, including 1 Erasmus student (UK) **Fafa Ikram Hocini**, 2023-2027, PhD CIFRE; **Xi Zhan**, 2021-2024, Chinese grant, ANR PARASOL, co-supervision with D. Lecourieux (UB); **Thomas Dussarrat**, 2019-2022, joint PhD with PUC, Chile and UB, FR (Dussarrat et al., 2021 ; 2022); **Guillaume Decros**, 2018-2022 (Decros et al., 2019a, 2019b, 2023; Dussarrat et al., 2021; Deslous et al., 2021).

Mariam Sangare (Master 2, 2023); **Haida Sané** (Master 1, 2023); **Karen Marcellin** and **Nahikari Prevost** (Master 2, 2023); **Cicely Day** (Erasmus L3, UK, 2022); **Marion Cariou** (Master 2, 2022); **Olivier Fustailon** (Master 2, 2021); **Charles Bastide** (co-supervision Master 2, 2020); **Taisei Maehara** (Master 2 Double Diplôme, Uni. Tsukuba, JP, 2020); **Lucie Lecat** (Master 1 GIP-TRIAD, 2020); **Bertille Cosseau** (Master 1, 2020); **Doriane Gaudfrin** (Master 1, 2020); **Camille Dorme** (Licence 3 Sup'Biotech, 2019); **Chloé Chevanne & Biranti**

^d New accreditation scheme 2022-2027 Master Bordeaux Biology AgroSciences (B2AS)

Sy (Master 1, 2019); **Camélia Feyrouse Kadiri & Chloé Chevanne** (Licence 3, 2018, Luna et al., 2020).

5 Post-docs: **Giovanni Melandri**, 2021-2022; **Malo Le boulch**, 2021-2024; **Millena Santos Barros**, 2022-2024; **Georges Randriafanomezantsoa-Radohery**, 2022-2024; **Claire-Line Marais**, 2023-2025.

Before 2017: 6 PhD co-supervisions

Will Buswell (Buswell et al., 2018), **Alex Williams** (Pétriacq et al., 2017b; Williams et al., 2017, 2018, 2019, 2020); **Sam Wilkinson** (Wilkinson et al., 2018); **Roland Schwarzenbacher** (Williams et al., 2018; Buswell et al., 2018); **Nazariya Yahaya** (Yahaya et al., 2017); **Linda de Bont** (Pétriacq et al., 2012, 2013, 2017a).

Educational and administrative responsibilities during the last 5 years

I have several administrative activities and elective functions as an associate professor for UMR1332, the University of Bordeaux, INRAE, *Bordeaux Metabolome* and the national infrastructure MetaboHUB. Very recently, I was elected Vice-President of the RFMF (see CV). The CV mentions these functions related to research, and a selection is recalled below. Other functions are also listed.

SELECTED ADMINISTRATIVE DUTIES

Research steering: Infrastructures (Bordeaux Metabolome, MetaboHUB), Projects (GPR BPS, ANR, H2020), Instruments (CPER, EQUIPEX+, INRAE DISC/CNOC, Region/Teaching)

Science animation: Plant metabolomics (INRAE, MetaboHUB, COST, RFMF), Redox (UMR1332)

Transversal duties: Quality (HR, R&D processes), Scientific board (UMR1332), INRAE (*Calculs Coûts Complètes & Tarifications*: C3T work group)

Selection committees: INRAE (Engineer, Technician), MetaboHUB (postdocs)

ORGANISATION OF SCIENTIFIC MEETINGS

3-6/06/2024	Organiser of 16 th Scientific days of French Speaking Network in Metabolomics and Fluxomics (~300 attendees, Saint Malo, FR)
21-22/09/2023	Organiser of French Workshop on Stable Isotopes (SFIS, ~50 attendees, Bordeaux, FR)
15-28/07/2023	Organiser of Bordeaux Summer School (8 attendees, Bordeaux, FR)
20-23/09/2022	Organiser of 5 th congress Natural Products & Biocontrol 2022 (~200 attendees, Perpignan, FR)
23-24/06/2022	Organiser of <i>CliMetabolomics</i> international summer school (13 attendees, Bordeaux, FR)
05-06/05/2022	Organiser of EU project GLOMICAVE annual meeting (15 attendees, Bordeaux, FR)
27-29/11/2019	Organiser of 2 nd French-Indian Symposium on plants with health benefits (~50 attendees, Bordeaux, FR)

EDITORIAL WORK

From 2021 **Senior Associate Editor**, *Front Plant Sci*
2020 – 2021 **Special Issue Editor**, *Metabolites*: [Fruit Metabolism and Metabolomics](#), [Metabolomics in Plant Defence](#)
Volume Editor, *Adv Bot Research* ([Plant Metabolomics in Full Swing](#))
From 2018 **Guest Associate Editor**, *Front Plant Sci & Metabolites*
From 2013 **Review Editor**, *Nature Comm, Plant Physiol, Plant J, New Phytol, J Ex Bot, Front Plant Sci, Biochemical J, Sci. Reports, Plant and Soil, PCE...*
On average, 10 papers reviewed per year.