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Teaching responsibilities

Head teacher of the first year of the Master “Plant Biology and Technology”

Director of studies of the Master of Engineering “CMI-Plant Systems Biology”

Projects

see the BGL team page

Scientific Career

1990 : PhD thesis, University of Besançon, France

1991 : Post-doctoral position at the University of Valencia (Spain), supported by a fellowship from FEBS (Federation of European Biochemical Societies)

1992 : MCF position at the University of Angers, France

2000 : Habilitation for PhD Supervision (HDR) University of Angers, France

2010 : MCF-HC

H-factor: 12

[Publications*](#) auteur correspondant

1 - Publications (P)

P1 - PUGIN A.*, MONTRICHARD F., LE-QUOC K. and LE-QUOC D. (1986) : Incidence of the method for the preparation of vacuoles on the vacuolar ATPase activity of isolated *Acer pseudoplatanus* cells. **Plant Science** 47, 165-172.

P2 - PUGIN A.* and MONTRICHARD F. (1988) : Some effectors of vacuolar ATPase and pyrophosphatase of *Acer pseudoplatanus*. **Plant Physiol.** (Life Sci. Adv.) 7, 97-100.

P3 - MONTRICHARD F., MAGNIN T. et PUGIN A. (1988) : Effet du vanadate sur l'ATPase vacuolaire d'*Acer pseudoplatanus* . **C. R. Soc. Biol.** 182, 208-221.

P4 - MONTRICHARD F., PUGIN A.* and GAUDEMER Y. (1989) : Inhibition of the vacuolar ATPase of *Acer pseudoplatanus* cells by vanadate. **Biochimie** 71, 813-817.

P5 - GLASER H-U., THOMAS D., GAXIOLA R., MONTRICHARD F., SURDIN-KERJAN Y. and SERRANO R.* (1993) : Salt tolerance and methionine biosynthesis in *Saccharomyces cerevisiae* involve a putative phosphate gene. **EMBO J.** 12, 3105-3110.

P6 - MORERE-LE PAVEN M-C., MONTRICHARD F., LUCET I., JALOUZOT R. and LAVAL-MARTIN D.L.* (1997) : NAD⁺ kinase activities in *Euglena gracilis* Z and *Phaseolus vulgaris* L. **Biol. Plant.** 40, 565-574.

P7 - DELUMEAU O., POU M-A., MONTRICHARD F. and LAVAL-MARTIN D.L.* (1998a) : Effect of aluminium on NAD⁺ kinase activity of *Euglena gracilis* grown heterotrophically. **Biol. Plant.** 41, 415-425.

P8 - DELUMEAU O., MONTRICHARD F. and LAVAL-MARTIN D.L.* (1998b) : NAD⁺ kinase activity, calmodulin levels during the growth of isolated cells from *Lycopersicon pimpinellifolium* and kinetic constants of the calmodulin-dependent NAD⁺ kinase. **Plant Science.** 138, 43-52.

P9 - MONTRICHARD F.*, LE GUEN F., LAVAL-MARTIN D.L. and DAVIOUD-CHARVET E. (1999) : Evidence for the co-existence of glutathione reductase and trypanothione reductase in the non-trypanosomatid Euglenozoa : *Euglena gracilis* Z. **FEBS lett.** 442, 29-33.

P10 - DELUMEAU O., MORÈRE-LE PAVEN M.-C., MONTRICHARD F. and LAVAL-MARTIN D. L.* (2000a) Effects of short-term NaCl stress on calmodulin transcript levels and calmodulin-dependent NAD kinase in two species of tomato. **Plant Cell Environ.** 23, 329-336.

P11 - STEPHAN C., RENARD M. and MONTRICHARD F.* (2000) : Evidence for the existence of two soluble NAD⁺ kinase isoenzymes in *Euglena gracilis* Z. **Int. J. Biochem. Cell Biol.** 32, 855-863.

P12 - DELUMEAU O., RENARD M. and MONTRICHARD F.* (2000b) : Characterization and possible redox regulation of the purified calmodulin-dependent NAD⁺ kinase from *Lycopersicon pimpinellifolium*. **Plant Cell Environ.** 23, 1267-1273.

P13 - DUVAL F., RENARD M., JAQUINOD M., BIOU. V, MONTRICHARD F. and MACHEREL D.* (2002). Differential expression and functional analysis of three calmodulin isoforms in germinating pea (*Pisum sativum* L.) seeds. **Plant J.** 32, 481-493.

P14 - MONTRICHARD F.*, RENARD M, ALKHALFIOUI F, DUVAL DF and MACHEREL D (2003). Identification and differential expression of two thioredoxin h isoforms in germinating seeds from pea (*Pisum sativum* L). **Plant Physiol.** 132, 1707-1715.

P15 – ALKHALFIOUI F, RENARD M, MONTRICHARD F.* (2007). Unique properties of NADP-thioredoxin reductase C in legume. **J. Exp. Bot.** 58, 969-978.

P16 - ALKHALFIOUI F, RENARD M, VENSEL B, WONG J, TANAKA C, HURKMAN W, BUCHANAN BB and MONTRICHARD F.* (2007) Thioredoxin-linked proteins are reduced in germinating seeds of the legume, *Medicago truncatula*. **Plant Physiol.** 144, 1559-1579

P17 - ALKHALFIOUI F, RENARD M, FRENDON P, KEICHLINGER C, MEYER Y, GELHAYE E, KNAFF D, HIRASAWA M, RITZENTHALER C and MONTRICHARD F.*

(2008). A novel type of thioredoxin dedicated to symbiosis in legumes. **Plant Physiol.** 148, 424-435

P18 - MONTRICHARD F*, ALKHALFIOUI F, YANO H, VENSEL B, HURKMAN W and BUCHANAN BB (2009). Thioredoxin targets in plants: the first 30 years. **J. Proteomics.** 72, 452-474

P19 - RENARD M, ALKHALFIOUI F and MONTRICHARD F* (2011). Identification and characterization of Trx h isoforms present in dry and germinating seeds of the model legume *Medicago truncatula*. **Plant Physiol.** 155, 1113-1126.

P20 – CHATELAIN E, SATOUR P, LAUGIER E, Ly Vu B, Payet, N, Rey P and MONTRICHARD F*. Evidence for the participation of the methionine sulfoxide reductase repair system in plant seed longevity. **Proc. Natl. Acad. Sci. USA** 110, 3633-3638.

P21 - PELLIZZARO A, CLOCHARD T, CUKIER C, BOURDIN C, JUCHAUX M, MONTRICHARD F, THANY S, RAYMOND V, PLANCHET E, LIMAMI A and MORERE-LE PAVEN MC (2014). The nitrate transporter MtNPF6.8 (MtNRT1.3) transports abscisic acid and mediates nitrate regulation of primary root growth in *Medicago truncatula*. **Plant Physiol.** 166, 2152-2165.

P22 – YOUSSEF C, AUBRY C, MONTRICHARD F, BEUCHER D, JUCHAUX M, BEN C, PROSPERI J-M and TEULAT B. Cell length instead of cell number becomes the predominant factor contributing to hypocotyl length genotypic differences under abiotic stress in *Medicago truncatula*. **Physiol Plant**: 21 SEP 2015. DOI: 10.1111/ppl.12379

2 - Ouvrages (O)

O1 - PUGIN A., MONTRICHARD F., LE-QUOC K. and LE-QUOC D. (1987) : Comparison of two methods for the isolation of vacuoles in relation to vacuolar ATPase activity. In “Plant vacuoles”, Marin B. Ed, NATO ASI series, Plenum Publishing Corporation, 135-141.

O2 - ROMER S., SAINT-GUILY A., MONTRICHARD F., SCHANTZ M.L., WEIL J-H., SCHANTZ R., KUNTZ M. and CAMARA B. (1992) : Characterization of cDNAs which encode enzymes involved in chromoplast differentiation and carotenoids synthesis in *Capsicum annuum*. In “Regulation of chloroplast biogenesis”, Argyroudi-koyunoglou J.H. Ed., Plenum Press New York, 63-69.

O3 - SERRANO R., ALI R., CULIANEZ-MACIA F.A., ESPINOSA A., FERRANDO, A., GARCIA M.J., GAXIOLA R., GLASER H-U., MARQUEZ J.A., MIRALLES V.J., MONTESINOS C., MONTRICHARD F., MURGUIA J.R., RIOS G., RODRIGUEZ P.L. and ROMERO C. (1996) Crucial reaction for salt tolerance. In “Physical stress in plants”, Nover L. and Leone A. Eds, Springer Berlin, 95-100.

O4 - BENAMAR A, GRELET J, TALLON C, TEYSSIER E, RENARD M, SATOUR P, DUVAL F, MONTRICHARD F, RICHOMME P, MACHEREL D (2003) Some observations on seed quality and mitochondrial performance. In: The biology of seeds: recent research advances. G. Nicolas, K.J. Bradford, D. Come and H.W. Pritchard (eds). CABI publishing, Wallingford, UK., 243-249.

3 - Communications

Communications orales (CO)

CO1 - ALKHALFIOUI F, RENARD M., and MONTRICHARD F. (2004). Etude des systèmes NADP/thioredoxines/ thiorédoxine réductases chez la légumineuse modèle *Medicago truncatula*. GDR Redoxines, Orsay, 10 septembre.

CO2 - ALKHALFIOUI F, RENARD M., BUCHANAN BB and MONTRICHARD F.(2005). Targets of thioredoxins h in germinating seeds from the model legume *Medicago truncatula*. "Redoxins and related proteins", Aussois, 26-30 juin.

CO3 - ALKHALFIOUI F, RENARD M., BUCHANAN BB and MONTRICHARD F. (2007). Thioredoxin-linked proteins are reduced during germination of seeds of *Medicago truncatula*. "Graines 2007", Angers, 7 et 8 juin.

CO4 - CHATELAIN E, LY VU B, BUITINK J and MONTRICHARD F (2009). Etat redox des protéines et longévité des graines de *Medicago truncatula*. GDR Redoxines, Perpignan 20-21 août.

CO5 – MONTRICHARD F, CHATELAIN E, SATOUR P and REY P (2013). Evidence for the participation of the methionine sulfoxide reductase repair system in plant seed longevity. ISSS Congress, Paris 9-12 juillet.

CO6 - MONTRICHARD F, CHATELAIN E, SATOUR P and REY P (2013). Implication des méthionine sulfoxyde réductases dans la longévité des graines. Graines 2013, Dijon, 30 et 31 octobre

CO7 – MONTRICHARD F. CHATELAIN E, SATOUR P and REY P (2014). Role of methionine sulfoxide reductase in seed longevity: from theory to practice. Séminaire QUALISEM « Déterminisme des qualités physiologique et sanitaire des semences » Angers, 2-3 décembre.

CO8 - MONTRICHARD F. Création de QCM par les étudiants pour une mise à niveau scientifique en L1 (2015). Journée E-pédagogie de l'Université d'Angers. Angers, 4 juin.

Communications affichées (CA)

CA1 - PUGIN A. et MONTRICHARD F. (1985). Méthode pour l'isolement des vacuoles de cellules d'*Acer pseudoplatanus*. Congrès de printemps de "La Société de Chimie Biologique". Besançon (France), 10-12 juillet.

CA2 - MONTRICHARD F. et PUGIN A. (1985). Nouvelle méthode pour l'isolement des vacuoles des cellules végétales (*Acer pseudoplatanus* L.) et mise en évidence d'une activité ATPasique vacuolaire. Forum des jeunes chercheurs de "La Société de Chimie Biologique", Liège (Belgique), 3-6 septembre.

CA3 - PUGIN A., MONTRICHARD F., LE-QUOC K. et LE-QUOC D. (1985). Activité ATPasique des vacuoles d'*Acer pseudoplatanus* L. isolées par ultracentrifugation sur gradient de densité. Second Symposium National de Bioélectrochimie, Strasbourg (France), 2-5 décembre.

CA4 - PUGIN A. et MONTRICHARD F. (1986). Quelques effecteurs des ATPase et pyrophosphatase vacuolaires d'*Acer pseudoplatanus*. Congrès de printemps de "La Société de Chimie Biologique", Gif-sur-Yvette (France), 26-27 mai.

CA5 - PUGIN A., MONTRICHARD F., LE-QUOC K. and LE-QUOC D. (1986). Properties of the vacuolar ATPase from *Acer pseudoplatanus*. NATO International Scientific Exchange Programme, Advanced Research Workshop, Sophia-Antipolis (France), 6-11 juillet.

CA6 - MONTRICHARD F., MAGNIN T. et PUGIN A. (1988). Effets du vanadate sur l'ATPase vacuolaire d'*Acer pseudoplatanus*. Congrès de printemps de "La Société de Biologie". Besançon (France), 21 mars.

CA7 - MONTRICHARD F. (1989). ATPase - pompe à protons du tonoplaste d'*Acer pseudoplatanus*. Programme d'échange ERASMUS, Biologie et Pathologie des Membranes, Universités de Besançon (France), Kaiserslautern (Allemagne) and Namur (Belgique). Besançon (France), 28 juin.

CA8 - KUNTZ M., ROMER S., SCHANTZ M.L., SAINT-GUILY A., MONTRICHARD F., WEIL J-H., SCHANTZ R., and CAMARA B. (1991). Characterization of cDNAs which encode enzymes involved in carotenoids synthesis and chromoplast differentiation in *Capsicum annuum*. International Meeting on the regulation of chloroplast biogenesis. Crète, Grèce, 28 juillet au 3 aout.

CA9 - GUERRIER G., DELUMEAU O., MONTRICHARD F. and LAVAL-MARTIN D. (1995). Proline accumulation and NAD kinase activity in tomato. 1st meeting of SALTO "New strategies for improving salt tolerance in crop plants" (European Project AIR3-CT94-1508), 20-21 janvier.

CA10 - DUVAL F., RENARD M., MONTRICHARD F. and MACHEREL D (2002) Differential expression of three calmodulin isoforms during germination of pea seeds. "VII International Workshop on Seed Biology". Salamanca, Espagne, 11-16 mai

CA11 - MONTRICHARD F., RENARD M., DUVAL F. and MACHEREL D (2002) A study of thioredoxins h during pea seed germination. "VII International Workshop on Seed Biology". Salamanca, Espagne, 11-16 mai.

CA12 - MONTRICHARD F., RENARD M., ALKHALFIOUI F., DUVAL F. and MACHEREL D (2003) Identification and differential expression of two thioredoxin h isoforms in germinating pea seeds. "5^{ème} Colloque Général de la Société Française de Physiologie Végétale". Orsay, 5-11 juillet.

CA13 - MONTRICHARD F., RENARD M., ALKHALFIOUI F., DUVAL F. and MACHEREL D (2003) Identification and differential expression of two thioredoxin h isoforms in germinating pea seeds. "Premières Rencontres du Végétal". Angers, 20-21 novembre.

CA14 - ALKHALFIOUI F, RENARD M and MONTRICHARD F* (2004). Role of thioredoxins h in legume seeds. “3rd Plant Genomics European Meetings”, Lyon, 21—25 septembre.

CA15 - RENARD M, ALKHALFIOUI F, BUCHANAN B and MONTRICHARD F (2007). Thioredoxin-linked proteins are reduced during germination of seeds of *Medicago truncatula*. Models legumes congress MIC 2007. Tunis, Tunisie, 24-29 mars.

CA16 - ALKHALFIOUI F, RENARD M, BUCHANAN BB and MONTRICHARD F (2007). Thioredoxin-linked proteins are reduced during germination of seeds of *Medicago truncatula*. Colloque National de la SFBV, Versailles, 12-14 septembre.

CA17 - RENARD M, ALKHALFIOUI F and MONTRICHARD F (2008). Characterization of thioredoxin h isoforms present in dry and germinating seeds of *Medicago truncatula*. 9th ISSS conference on seed biology, Olsztyn, Pologne, 6-12 juillet.

CA18 - ALKHALFIOUI F, RENARD M, FRENDO P, KEICHINGER C, MEYER Y, GELHAYE E, HIRASAWA M, KNAFF DB, RITZENTHALER C and MONTRICHARD F (2008). A novel type of thioredoxin dedicated to symbiosis in legumes. Glutathion, Nancy, 26-29 août.

CA19 – CHATELAIN E, LY VU B, BUITINK J and MONTRICHARD F (2009). Etat redox des protéines et qualité physiologique des graines de légumineuses. Graines 2009, Dijon, 4 et 5 juin.

CA20 – CHATELAIN E, LY VU B, BUITINK J and MONTRICHARD F (2009). Protein redox state and legume seed quality. ROS Meeting, Helsinki, 8-10 juillet.

CA21 - ALKHALFIOUI F, RENARD M, FRENDO P, KEICHINGER C, RITZENTHALER C and MONTRICHARD F (2011) Role of thioredoxins in *Medicago truncatula*. Model Legume Congress. Sainte-Maxime, France, 15-19 mai.

CA22 - CHÂTELAIN E, SATOUR P, MONTRICHARD F (2011) Protein redox state and legume seed quality. Graines 2011, Nantes, 27-28 octobre.

CA23 – NEE G, INNOCENTI G, MEIMOUN P, LEYMARIE J, MONTRICHARD F, BAILLY C, ISSAKIDIS-BOURGUET E (2013). A new role for a specific class of thioredoxin in seed physiology. ISSS Congress, Paris 9-12 juillet.

CA24 – SATOUR P, YOUSSEF C, CHÂTELAIN E and MONTRICHARD F* (2015). Role of protein carbonylation in seeds of *Medicago truncatula*. Graines 2015, Clermont-Ferrand, 27-29 octobre.