

Philippe GRAPPIN

IRHS, INRA-Université d'Angers-Agrocampus Ouest, centre d'Angers
SFR 4207 QUASAV, 42, rue Georges Morel, BP 60057, 49071 Beaucouzé cedex
Tel : 33 (1) 241 225 426
Fax : 33 (1) 241 225 515
Mail : philippe.grappin@agrocampus-ouest.fr



Appointments

- 2013 - ... Assistant Professor (MC) in Plant Genetics, Agrocampus Ouest, 2 rue André Lenôtre, 49045 Angers cedex 05, France. Research activity in FUNGISEM group : Seed-pathogen interaction controlling transgenerational propagation
- 1992 - 2013 (MC) in AgroParisTech - UFR of Plant Physiology (Life Sciences and Health Department) – Group Reproduction and Seed, IJPB UMR1318 INRA AgroParisTech.

Professional Preparation

Capacity to supervise researches (HDR) in Life Science (Plant Biology), 2006,
PhD : 1995 – Plant Biology,
MSc : 1991 – Plant Molecular and Cell Biology, Paris XI University, Orsay, France

Scientific Production

- *Scientific Publication in International Peer-Reviews*

- 1- Dubreucq B., **Grappin P.** and Caboche M. (1996). A new method for the identification and isolation of genes essential for *Arabidopsis thaliana* seed germination. *Mol. Gen. Genet.* **252** : 42-50.
- 2- Grandbastien M.A., Audéon C., Casacuberta J.M., **Grappin P.**, Lucas H., Moreau C. and Pouteau S. (1994). Functional analysis of the tobacco Tnt1 retrotransposon. *Genetica*, **93**, 181-189.
- 3- **Grappin P.**, Audéon C., Chupeau M.C., and Grandbastien M.A. (1996). Molecular and functional characterization of Slide, an AC-like autonomous transposable element from tobacco. *Mol. Gen. Genet.* **252** : 386-397.
- 4- **Grappin P.**, Bouinot D, Sotta B, Miginiac E et M Jullien (2000). Control of seed dormancy in *Nicotiana glauca*: A post imbibition abscisic acid synthesis imposes dormancy maintenance. *Planta* **210** :279-285.
- 5- Cervantes E, De Diego JG, Gómez MD, De Las Rivas J, Igual JM, Velázquez E, **Grappin P.**, Cercós M and Carbonell J. (2001) Expression of cysteine proteinase mRNA in chickpea (*Cicer arietinum*, L) is localized with provascular cells in the developing root. *J. Plant Physiol.*, **158**, 1463-1469.
- 6- Bove J., Jullien M. et **Grappin P.**, 2001. Functional genomics in the study of seed germination. *Genome Biology*, **3**, 1002-1005.
- 7- Ali-Rachedi A., Bouinot D., Wagner MH., Bonnet M., Sotta B., **Grappin P.**, Jullien M. (2004) Changes in endogenous abscisic acid levels during dormancy release and maintenance of mature seeds: studies with the Cape Verde Islands ecotype, the dormant model of *Arabidopsis thaliana*. *Planta*, **219**, 479-488.

- 8- Bove J., Lucas P., Godin B., Ogé L., Jullien M. and **Grappin P.** (2005) Gene expression analysis by cDNA-AFLP highlights a set of new signaling networks and translational control during seed dormancy breaking in *Nicotiana plumbaginifolia*. *Plant Mol Biol.*, 57, 593-612.
- 9- De Diego J.G., Rodríguez F.D., Rodríguez Lorenzo J.L., **Grappin P.** and Cervantes E. (2006) cDNA-AFLP analysis of seed germination in *Arabidopsis thaliana* identifies transposons and new genomic sequences. *J. Plant Physiol.*, 163, 452-462.
- 10- Chibani K., Ali-Rachedi S., Job C., Job D., Jullien M., and **Grappin P.** (2006) Proteomic analysis of seed dormancy. *Plant Physiol*, **142**, 1493-1510.
- 11- Holdsworth M.J., Finch-Savage W., **Grappin P.**, Job D. (2008) Post-genomics dissection of seed dormancy and germination. *Trends Plant Sci*, **13**, 7-13.
- 12- Ogé L., Bourdais G., Bove J., Collet B., Godin B., Granier F., Boutin J.P., Job D., Jullien M., **Grappin P.** (2008) Arabidopsis protein repair L-isoaspartyl methyltransferase1 is involved both in seed survival during storage and in germination vigor. *Plant Cell*, **20**, 3022-3037.
- 13- **Grappin P.** (2008) Seed aging and survival mechanisms. *J Biol Sci*, **202**, 231-239 (ASCLN)
- 14- North H., Baud S., Debeaujon I., Dubos C., Dubreucq B., **Grappin P.** et al. (2010) Arabidopsis seed secrets unravelled after a deced of genetic and omics-driven research. *Plant J*, **61**, 971-981.
- 15- **Grappin P.**, Collet B., Hongqian Y.A., Jallet D., Ogé L., and Zubarev R. New proteomic developments to analyze protein isomerization and their biological significance in plants. *J Proteomics*, **74**, 1475-1482.
- 16- Arc E., Chibani K., **Grappin P.**, Jullien M., Godin B., Cueff G., Valot B., Balliau T., Job D., Rajjou L. (2012) Cold stratification and exogenous nitrates entail similar functional proteome adjustments during Arabidopsis seed dormancy release. *J Proteome Res.* 11(11), 5418-32.

- International Patents

- 1- **Grappin P.**, Ogé L. and Bove J. (2005) Using L-isoaspartyl methyltransferase as molecular marker of seed ageing. Patent registration in France n° 03 13858. Extention internationale WO/2005/
- 2- **Grappin P.** Ogé L. (2011) S-Adenosine homocysteine quantitation to monitor seed storability and seed vigor. Patent Registration in France 08 06161, extension internationale en cours

- Scientific Book Chapters

- 1- Jullien M., Bouinot D., Ali-Rachedi S., **Grappin P.** (2000) Abscisic acid control of seed dormancy expression in *Nicotiana plumbaginifolia* and *Arabidopsis thaliana*. In ***Dormancy in Plants (Eds J-D Viemont, J. Crabbé) CAB International Pub. (UK), August 2000, Ch. III.***
- 2- Rajjou L., Belghazi M., Catusse J., Ogé L., **Grappin P.**, Jullien M., Job C., Job D. (2011) Proteomics and Post-Translational Proteomics of Seed Dormancy and Germination. In ***Seed Dormancy (Ed A Kermode) Methods and Molecular Biol. Humana Press Inc. (USA), 773, 215-36***
- 3- Ogé L., Broyart C., Collet B., Jallet D., Bourdais G., Job D., **Grappin P.** (2011) Protein damage and repair controlling seed vigor and longevity. In ***Seed Dormancy (Ed A Kermode) Methods and Molecular Biol. Humana Press Inc. (USA), 773***
- 4- **Grappin P.**, Ogé L., Arc E. and Rajjou L. (2011) Plant Seed : A Pertinent Model to Study Aging Processes. In ***The Field of Biological Aging: Past, Present and Future (Ed A Olgun) Research Signpost Pub.***, pp 87-102.

- Scientific Reviews

- 1- **Grappin P.** et Grandbastien M.A. (1993). Transposable elements and genetic variability in tobacco plant (*Nicotiana tabacum*). *Bull. ARN.* 57-65.
- 2- Caboche M., Dubreucq B., **Grappin P.**, Lepiniec L., et Nesy N. (1998). La germination vient en dormant. *Biofutur.* **175** : 32-35.
- 3- Dubreucq B., **Grappin P.**, Miquel M., North H., Rochat C., Jullien M. (2001) Approches moléculaires de la qualité et du développement des graines. *OCL* 8 : 487-495.
- 4- **Grappin P.** (2008) Seed conservation and research. Improving molecular markers to optimise long-term germplasm conservation. *ENSCoNews*, **4**, 9-11.

Attendance at national (22 lectures) and international conférences (10 lectures)