



COST Action FA0605

“Signalling control of stress tolerance and
production of stress protective compounds in plants. “
International Network of Plant Abiotic Stress” (INPAS)

<http://www.cost.esf.org/index.php?id=181&action number=FA0605>

<http://cost-inpas.org/>.

Published papers until 2009

- Acioli-Santos, B.; Sebastiana, M.; Pessoa, F.; Sousa, L.; Figueiredo, A. ; Fortes, A.M.; Baldé, A.; Maia, L.C.; Pais, M.S.** (2008) Fungal transcript pattern during pre-infection stage (12h) of ectomycorrhiza formed between *Pisolithus tinctorius* and *Castanea sativa* roots, using cDNA microarrays. *Current Microbiology*, 57(6): 620-625.
- Akkurt, M.; Welter, L.; Maul, E.; Töpfer, R.; Zyprian E.** (2007) Development of SCAR markers linked to powdery mildew (*Uncinula necator*) resistance in grapevine (*Vitis vinifera* L and *Vitis* sp). *Molecular Breeding*, 19: 103-111.
- Amasino, R. M., Vierstra, R. D., Nagy, F., and Davis, S. J.** (2007) Attenuation of Brassinosteroid Signaling Enhances FLC Expression and Delays Flowering. Development 134:2841-2850 (Faculty of 1000 review: Recommended) (Cover image & In this Issue featured)
- Ambrosone, A., Costa, A., Frusciante, L., Monti, L., Leone, A., Grillo, S.** (2008): -Unravelling the molecular cues of plant adaptation or survival to water deficit. *Options Méditerranéennes, A 83, Irrigation in Mediterranean Agriculture: challenges and innovation for the next decades.* 84, 85-91. ISBN2-85352-408-6.
- Angelini, R.; Tisi, A.; Rea, G.; Chen, M.M.; Botta, M.; Federico R.; Cona, A.** (2008) Involvement of Polyamine Oxidase in Wound Healing. *Plant Physiology*, 146: 162-17.
- Anisimovienė, N.; Jankauskienė, J.; Novickienė, L.** (2008) Actualities in plant cold acclimation Sodininkystė ir daržininkystė. *Mokslo darbai*, 27(2): 99-109.
- Atanassov, A.; Batchvarova, R.; Djilianov, D.** (2007) Strategic vision for plant biotechnology and genomics development. *Biotechnology & Biotechnology Eq.*, 21: 1-7.
- Bacsó, R.; Molnár, A.; Papp, I.; Janda, T.** (2008) Photosynthetic behaviour of Arabidopsis plants with a Cap Binding Protein 20 mutation under water stress conditions. *Photosynthetica*, 46(2): 268-272.
- Bacsó, R.; Janda, T.; Galiba, G.; Papp, I.** (2008) Study of the fitness from the *cbp20* mutant Arabidopsis. *Cereal Research Communications*, 36: 2091-2094.

- Bacsó, R.; Janda, T.; Galiba, G.; Papp, I.** (2008) Restricted transpiration may not result in improved drought tolerance in competitive environment for water. *Plant Science*, 174: 200-204.
- Barrero, J.M.; Rodríguez, P.L.; Quesada, V.; Alabadí, D.; Blázquez, M.A.; Boutin, J.P.; Marion-Poll, A.; Ponce, M.R.; Micol, J.L.** (2008) The ABA1 gene and carotenoid biosynthesis are required for late skotomorphogenic growth in *Arabidopsis thaliana*. *Plant Cell Environment*, 31: 227-234.
- Bartels, D.; Hussain, S.S.** (2008) Current status and implications of engineering drought tolerance in plants using transgenic approaches. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources*, 3: 1-17.
- Batelli, G.; Verslues, P.E.; Agius, F.; Qiu, Q.; Fujii, H.; Pan, S.; Schumaker, K.S.; Grillo, S.; Zhu, J.K.** (2007) SOS2 promotes salt tolerance in part by interacting with the vacuolar H⁺-ATPase and upregulating its transport activity. *Molecular and Cellular Biology*, 27(22): 7781-90.
- Békésiová B, Hraška Š, Libantová J, Moravčíková J, Matušíková I** (2008) Heavy-metal stress induced accumulation of chitinase isoforms in plants. *Molecular Biology Reports*, 35: 579-588.
- Berdasco, M.; Alcázar, R.; García-Ortiz, M.V.; Ballestar, E.; Fernández, A.F.; Roldán-Arjona, T.; Tiburcio, A.F.; Altabella, T.; Buisine, N.; Quesneville, H.; Baudry, A.; Lepiniec, L.; Alaminos, M.; Rodríguez, R.; Lloyd, A.; Colot, V.; Bender, J.; Canal, M.J.; Esteller, M.; Fraga, M.F.** (2008) Promoter DNA hypermethylation and gene repression in undifferentiated *Arabidopsis* cells. *PLoS One*, 3(10): e3306.
- Birkemeyer, C.; Kopka, J.** (2007) Design of metabolite recovery by variations of the metabolite profiling protocol. In: *Nikolau BJ, Wurtele ES (eds). Concepts in plant metabolomics. Springer-Verlag, Dordrecht, Netherlands, pp 45-69.*
- Bor, M.; Ozdemir, F.; Turkan, I.** (2008) Gaba and hormone response of sesame plant (*Sesamum indicum* L) under different abiotic stresses. *Photosynthesis Research*, 91(2-3): 321-322.
- Böttcher, C.; Centeno, D.; Freitag, J.; Hoefgen, R.; Koehl, K.; Kopka, J.; Kroymann, J.; Matros, A.; Mock, H.P.; Neumann, S.; Pfalz, M.; von Roepenack-Lahaye, E.; Schauer, N.; Trenkamp, S.; Zubriggen, M.; Fernie, A.R.** (2008) Teaching (and learning from) metabolomics - The 2006 PlantMetaNet ETNA metabolomics research school. *Physiologia Plantarum*, 132 (2): 136-149.
- Bou Dagher-Kharrat, M.; Mariette, S.; Lefèvre, F.; Fady, B.; Grenier- de March, G.; Plomion, C.; Savouré, A.** (2007) Geographical diversity and genetic relationships among *Cedrus* species estimated by AFLP. *Tree Genetics & Genome*, 3: 275-285.
- Brini, F.; Hanin, M.; Lumbreras, V.; Amara, I.; Khoudi, H.; Hassairi, A.; Pagès, M.; Masmoudi, K.** (2007) Overexpression of wheat dehydrin DHN-5 enhances tolerance to salt and osmotic stress in *Arabidopsis thaliana*. *Plant Cell Reports*, 26(11): 2017-26.
- Cartieaux, F.; Contesto, C.; Gallou, A.; Desbrosses, G.; Kopka, J.; Tacconnat, L.; Renou, J.P.; Touraine, B.** (2008) Simultaneous interaction of *Arabidopsis thaliana* with *Bradyrhizobium*

sp strain ORS278 and *Pseudomonas syringae* pv tomato DC3000 leads to complex transcriptome changes. *Molecular Plant Microbe Interactions*, 21(2): 244-259.

Carvalho, M.; Pinheiro, C.; Bartels, D.; Ricardo, C.; Chaves, M. (2008) Dehydrins in *Lupinus albus*: pattern of protein accumulation and gene expression in response to drought. *Functional Plant Biology*, 35: 85-91.

Castro C.B.; Whittock L.D.; Whittock S.P.; Leggett G.; Koutoulis A. (2008) DNA sequence and expression variation of hop (*Humulus lupulus* L.) valerophenone synthase (VPS), a key gene in bitter acid biosynthesis. *Annals of Botany*, 102: 265-273.

Chien, M.F.; Huang, C.C.; Kusano, T.; Endo, G. (2008) Facilities for transcription and mobilization of an exon-less bacterial group λ intron nested in transposon TnMERII. *Gene*, 408: 164-171.

Craig, W., Lenzi, P., Scotti, N., De Palma, M., Saggese, P., Carbone, V., McGrath Curran, N., Magee, A.M., Medgyesy, P., Kavanagh, T.A., Dix, P.J., Grillo, S., Cardi, T. (2008): Transplastomic tobacco plants expressing a fatty acid desaturase gene exhibit altered fatty acid profiles and improved cold tolerance. *Transgenic Research* 17: 769 - 782

Cuevas, J. C.; López-Cobollo, R.; Alcázar, R.; Koncz, C.; Altabella, T.; Salinas, J.; Tiburcio, A. F.; Ferrando, A. (2008) Putrescine is involved in Arabidopsis freezing tolerance and cold acclimation by regulating ABA levels in response to low temperature. *Plant Physiology*, 148: 1094-1105.

Cummings, I.G.; Foo, E.; Weller, J.L.; Reid, J.B.; Koutoulis, A. (2008) Blue and red photoselective shade cloths modify pea height through altered blue irradiance perceived by the cry1 photoreceptor. *Journal of Horticultural Science & Biotechnology*, 83: 663-667.

Cummings, I.; Reid, J.B.; Koutoulis, A. (2007) Red to far-red ratio correction in plant growth chambers – growth responses and influence of thermal load on garden pea. *Physiologia Plantarum*, 131: 171-179.

Datta, K.; Tuteja, N.; Datta, S.K. (2008) Transgenic research on plant abiotic stress and nutrition improvement of food derived from plants. In: *A Transgenic Approach in Plant Biochemistry and Physiology*, pp. 181-215. Editors: Marisela Rivera-Domínguez, Rosalba-Troncoso Rojas and Martín Ernesto Tiznado-Hernández. *Research Signpost* 37/661 (2), Fort P.O.; Trivandrum-695 023, Kerala, India.

Dauwe, R.; Morreel, K.; Goeminne, G.; Gielen, B.; Rohde, A.; Van Beeumen, J.; Ralph, J.; Boudet, A.M.; Kopka, J.; Rochange, S.F.; Halpin, C.; Messens, E.; Boerjan, W. (2007) Molecular phenotyping of lignin-modified tobacco reveals associated changes in cell-wall metabolism, primary metabolism, stress metabolism and photorespiration. *Plant Journal*, 52 (2): 263-285.

De Palma, M.; Grillo, S.; Massarelli, I.; Costa, A.; Balogh, G.; Vigh, L.; Leone, A. (2008) Regulation of desaturase gene expression, changes in membrane lipid composition and freezing tolerance in potato plants. *Molecular Breeding*, 21(1): 15-26.

Desclos, M.; Dubouset, L.; Etienne, P.; Le Caherec, F.; Satoh, H.; Bonnefoy, J.; Ourry, A.; Avicé, J. (2008) A proteomic profiling approach to reveal a novel role of *Brassica napus*

drought 22 kD/water-soluble Chlorophyll-binding protein in young leaves during nitrogen remobilization induced by stressful conditions. *Plant Physiology*, 147: 1830-1844.

Ding, Z., Millar, A. J., Davis, A. M., Davis, S. J. (2007) TIME FOR COFFEE encodes a nuclear regulator in the Arabidopsis thaliana circadian clock. *Plant Cell* 19: 1522-1536 Domagalska, M. A., Schomburg, F. M.,

Ding, Z., Doyle, M. R., Amasino, R. M., and Davis, S. J. (2007) A complex genetic interaction between Arabidopsis thaliana TOC1 and CCA1/LHY in driving the circadian clock and in output regulation. *Genetics* 176: 1501-1510 (Cover image & an Issue Highlight)

Docquier, S.; Kevers, C.; Lambe, P.; Gaspar, T.; Dommès, J. (2007) Beneficial use of lignosulfonates in in vitro plant cultures: stimulation of growth, of multiplication and of rooting. *Plant Cell Tissue Organ Culture*, 90: 285-291.

Domagalska, M.A.; Schomburg, F.M.; Amasino, R.M.; Vierstra, R.D.; Nagy, F.; Davis, S.J. (2007) Attenuation of Brassinosteroid Signaling Enhances FLC Expression and Delays Flowering. *Development*, 134: 2841-2850.

Echeverría, M.; Scambato, A.A.; Sannazzaro, A.I.; Maiale, S.J.; Ruiz, O.A.; Menéndez, O.A. (2008) Phenotypic plasticity with respect to salt stress response by Lotus glaber: the role of AM fungal and rhizobial symbionts. *Mycorrhiza*, 18: 317-329.

Eibach, R.; Zyprian, E.; Welter, R.; Töpfer R. (2007) The use of molecular markers for pyramiding resistance genes in grapevine breeding. *Vitis*, 46(2): 120-124.

Eisenhut, M.; Huege, J.; Schwarz, D.; Bauwe, H.; Kopka, J.; Hagemann, M. (2008) Metabolome phenotyping of inorganic carbon limitation in cells of the wild type and photorespiratory mutants of the cyanobacterium *Synechocystis sp* strain PCC 6803. *Plant Physiology*, 148(4): 2109-2120.

Else, M.A.; Janowiak, F.; Atkinson, C.J.; Jackson, M.B. (2008) Root signals and stomatal closure in relation to photosynthesis chlorophyll a fluorescence and adventitious rooting of flooded tomato plants. *Annals of Botany*, 103(2): 313-323.

Erban, A.; Schauer, N.; Fernie, A.R.; Kopka, J. (2007) Non-supervised construction and application of mass spectral and retention time index libraries from time-of-flight GC-MS metabolite profiles. In: Weckwerth W (ed) *Metabolomics: methods and protocols*. Humana Press, Totowa, pp. 19-38

Escaray, F.J.; Pesqueira, J.; Pieckenstain, F.L.; Carrasco, P.; Ruiz, O.A. (2007) Condensed Tannins and anthocyanidins in the *Lotus* genus: Relationships with saline stress in forage species devoted for marginal soils. *Innovación y Tecnología Agroalimentaria (ITA España)*, 2: 113-123.

Fabro, G.; Di Rienzo, J.A.; Voigt, C.A.; Savchenko, T.; Dehesh, K.; Somerville, S.; Alvarez, M.E. (2008) Genome-wide expression profiling *Arabidopsis* at the stage of *Golovinomyces cichoracearum* haustorium formation. *Plant Physiology*, 146: 1421-1439.

Fait, A.; Fromm, H.; Walter, D.; Galili, G.; Fernie, A.R. (2008) Highway or byway: the metabolic role of the GABA shunt in plants. *Trends in Plant Science*, 13: 14-19.

- Fast-Seefeldt, H.; Viereck, N.; Hoffmann-Larsen, F.; Balling-Engelsen, S.; Wollenweber, B.** (2008) Bulk carbohydrate grain filling of barley Δ -glucan mutants studied by ^1H HR MAS NMR. *Cereal Chemistry*, 85(4): 571-577.
- Figueiredo, A.; Fortes, A. M.; Ferreira, S.; Sebastiana, M.; Choi, Y.H.; Sousa, L.; Acioli-Santos, B.; Pessoa, F.; Verpoorte, R.; Pais, M.S.** (2008) Transcriptional and metabolic profiling of grape (*Vitis vinifera* L) leaves unravel possible innate resistance against pathogenic fungi. *Journal of Experimental Botany*, 59(12): 3371-3381.
- Fluch S, Olmo CCh, Tauber S, Stierschneider M, Kopecky D, Reichenauer T, Matušíková I.** (2008) Transcriptomic changes in wind-exposed poplar leaves are dependent on developmental stage. *Planta* 228: 757-764.
- Fortes, A.M.; Santos, F.; Choi, Y.H.; Silva, M.S.; Figueiredo, A.; Sousa, L.; Pessoa, F.; Acioli-Santos, B.; Sebastiana, M.; Palme, K.; Malhó, R.; Verpoorte, R.; Pais, M.S.** (2008) Organogenic nodule development in hop (*Humulus lupulus* L.): transcript and metabolic responses. *BMC Genomics*, 9: 445.
- Francisco, J.; Pesqueira, J.; Pieckenstain, F.L.; Carrasco, P.; Ruiz, O.A.** (2007) Taninos condensados y antocianinas en el género Lotus: su relación con el estrés salino en especies forrajeras para zonas marginales. *Escaray, Innovación y Tecnología Agroalimentaria. (ITA España)*, 2: 113-123.
- Franck, T.; Kohlen, S.; Grulke, S.; Neven, P.; Goutman, Y.; Peters, F.; Pirotte, B.; Deby-Dupont, G.; Serteyn, D.** (2008) Inhibitory effect of curcuminoids and tetrahydrocurcuminoids on equine activated neutrophils and myeloperoxidase activity. *Physiology Research*, 57: 577-587.
- Furini, A.; Varotto, S.; Borgato, L.; Hilbricht, T.; Sgaramella, V.; Salamini, F.; Bartels, D.** (2008) Plant resurrection, SINE retrotransposons and siRNA: environment-mediated evolution of desiccation tolerance. *New Phytologist*, 179 (3): 877-887.
- Garriz, A.; González, M.E.; Marina, M.; Ruiz, O.A.; Pieckenstain, F.** (2008) Polyamine metabolism during sclerotial development of *Sclerotinia sclerotiorum*. *Micological Research*, 112: 414-422.
- Gavelienė, V.; Novickienė, L.; Miliuvienė, L.** (2007) Improving of oilseed rape lateral root formation by physiological analogues of auxin. *Acta Physiologia Plantarum*, 29: 291-295.
- Gavelienė, V.; Novickienė, L.; Kazlauskienė, D.** (2007) Effect of auxin physiological analogues on rape growth and reproductive development. *Botanica Lithuanica*, 13(2): 101-107.
- Gavelienė, V.; Kazlauskienė, D.; Novickienė, L.** (2008) Vegetative cone development and reproductive organs formation in oilseed rape. *Vagos*, 81(34): 17-22.
- Ghars, M.A.; Parre, E.; Debez, A.; Bordenave, M.; Richard, L.; Leport, L.; Bouchereau, A.; Savouré, A.; Abdelly, C.** (2008) Comparative salt tolerance analysis between *Arabidopsis thaliana* and *Thellungiella halophila*, with special emphasis on K^+/Na^+ selectivity and proline accumulation. *Journal of Plant Physiology*, 165: 588-599.

- Gonorazky, G.; Laxalt, A.M.; Testerink, C.; Munnik, T.; de la Canal, L.** (2008) Phosphatidylinositol 4-phosphate accumulates extracellularly upon xylanase treatment in tomato cell suspensions. *Plant Cell & Environment*, 31: 1051-1062.
- Grzesiak, M.T.; Rzepka, A.; Hura, T.; Hura, K.; Skoczowski, A.** (2007) Changes in response to drought stress of triticale and maize genotypes differing in drought tolerance. *Photosynthetica*, 45: 280-287.
- Grzesiak, M.T.; Rzepka, A.; Hura, T.; Hura, K.; Skoczowski, A.** (2007) Fluorescence excitation spectra of drought resistant and sensitive genotypes of triticale and maize. *Photosynthetica*, 45: 606-611.
- Gumze, A.; Spoljarevic, M.; Kerovec, D.; Teklic, T.; Kovacevic, V.** (2008) The influences of genotype and soil on maize nutritional status and free proline content. *Cereal Research Communications*, 36(5): 1279-1282.
- Guy, C.L.; Kopka, J.; Moritz, T.** (2008) Plant metabolomics coming of age. *Physiologia Plantarum*, 132(2): 113-116.
- Guy, C.L.; Kaplan, F.; Kopka, J.; Selbig, J.; Hinch, D.** (2008) Metabolomics of temperature stress. *Physiologia Plantarum*, 132(2): 220-235.
- Hanano, S. and Davis, S. J.** (2007) Mind the Clock Plant Signaling and Behavior 6: 477-479
Kolmos, E. and Davis, S. J. (2007) Circadian Rhythms: Rho-Related Signals in Time-Specific Light Perception. *Curr. Biol.* 17:R 808-810
- Hanano, S., Stracke, R., Jakoby, M., Merkle, T., Domagalska, M. A., Weisshaar, B., and Davis, S. J.** (2008) A systematic survey in *Arabidopsis thaliana* of transcription factors that modulate circadian parameters. *BMC Genomics* 9:182 (This paper is noted as "highly accessed")
- Hannah, M.A.; Kraemer, K.M.; Geffroy, V.; Kopka, J.; Blair, M.W.; Erban, A.; Vallejos, C.E.; Heyer, A.G.; Sanders, F.E.T.; Millner, P.A.; Pilbeam, D.J.** (2007) Hybrid weakness controlled by the dosage-dependent lethal (DL) gene system in common bean (*Phaseolus vulgaris*) is caused by a shoot-derived inhibitory signal leading to salicylic acid-associated root death. *New Phytologist*, 176 (3): 537-549.
- Harlow, L.D.; Koutoulis, A.; Hallegraeff, G.M.** (2007) S-adenosylmethionine synthetase genes from eleven marine dinoflagellates. *Phycologia*, 46: 46-53.
- Harlow, L.D.; Negri, A.; Hallegraeff, G.M.; Koutoulis, A.** (2007) *Sam*, *Sahh* and *Map* gene expression during cell division and paralytic shellfish toxin production of *Alexandrium catenella* (Dinophyceae). *Phycologia*, 46: 666-674.
- Harvest, T.; Brown P.H.; Fist, A.; Gracie, A.; Gregory, D.; Koutoulis, A.** (2008) The latex capacity of opium poppy capsules is fixed early in capsule development and is not a major determinant in morphine yield. *Annals of Applied Biology*, 154: 251-258.
- Hengherr, S.; Heyer, A.G.; Köhler, H.R.; Schill, R.O.** (2008) Trehalose and Anhydrobiosis: Existence and accumulation of trehalose in different tardigrade species during desiccation. *FEBS Journal*, 275: 281-288.

- Hernandez, G.; Ramirez, M.; Valdes-Lopez, O.; Tesfaye, M.; Graham, M.A.; Czechowski, T.; Schlereth, A.; Wandrey, M.; Erban, A.; Cheung, F.; Wu, H.C.; Lara, M.; Town, C.D.; Kopka, J.; Udvardi, M.K.; Vance, C.P.** (2007) Phosphorus stress in common bean: Root transcript and metabolic responses. *Plant Physiology*, 144 (2): 752-767.
- Hernández-Lucero, E.; Ruiz, O.A.; Jiménez-Bremont, J.F.** (2008) Effect of salt stress on polyamine metabolism in two bean cultivars. *Plant Stress*, 2: 96-102.
- Hincha, D.K.; Livingston, DP.III.; Premakumar, R.; Zuther, E.; Obel, N.; Cacela, C.; Heyer A.G.** (2007) Fructans from oat and rye: Composition and effects on membrane stability during drying. *Biochimica & Biophysica Acta*, 1768: 1611–1619.
- Hoehenwarter, W.; van Dongen, J.T.; Wienkoop, S.; Steinfath, M.; Hummel, J.; Erban, A.; Sulpice, R.; Regierer, B.; Kopka, J.; Geigenberger, P.; Weckwerth, W.** (2008) A rapid approach for phenotype-screening and database independent detection of cSNP/protein polymorphism using mass accuracy precursor alignment. *Proteomics*, 8(20): 4214-4225.
- Huege, J.; Sulpice, R.; Gibon, Y.; Lisek, J.; Koehl, K.; Kopka, J.** (2007) GC-EI-TOF-MS analysis of in vivo-carbon-partitioning into soluble metabolite pools of higher plants by monitoring isotope dilution after (¹³CO₂)-labelling. *Phytochemistry*, 68 (16-18): 2258-2272.
- Hummel, J.; Selbig, J.; Walther, D.; Kopka, J.** (2008) The Golm metabolome database: a database for GC-MS based metabolite profiling. In: *Nielsen J, Jewett M (eds) Metabolomics a powerful tool in systems biology. Topics in Current Genetics Vol. 18, Springer-Verlag, Berlin, Heidelberg, New York, pp 75-96.*
- Hura, T.; Hura, K.; Grzesiak, M.T.; Rzepka, A.** (2007) Effect of long-term drought stress on leaf gas exchange and fluorescence parameters in C₃ and C₄ plants. *Acta Physiol. Plant.*, 29: 103-113.
- Ishihara, T.; Sekine, K.T.; Hase, S.; Kanayama, Y.; Seo, S.; Ohashi, Y.; Kusano, T.; Shibata, D.; Shah, J.; Tahahashi, H.** (2008) Overexpression of the Arabidopsis thaliana EDS5 gene enhances resistance to viruses. *Plant Biology*, 10: 451-461.
- Jacques, P.; Kevers, C.; Gaspar, T.; Dommès, J.; Thonart, P.** (2007) Conditioning Panax vietnamensis cell mass production in bioreactors. *Acta Botanica Gallica*, 154: 21-26.
- Jerzmanowski, A.** (2007) SWI/SNF chromatin remodeling and linker histones in plants. *Biochimimica & Biophysica Acta*, 1769: 330-345.
- Jiménez-Bremont, J.F.; Ruiz, O.A.; Rodríguez Kessler, M.** (2007) Modulation of spermidine and spermine levels in maize seedlings subjected to long-term saline stress. *Plant Physiology and Biochemistry*, 45: 812-821.
- Jubault, M.; Hamon, C.; Gravot, A.; Lariagon, C.; Delourme, R.; Bouchereau, A.; Manzanares-Dauleux, M.J.** (2008) Differential regulation of root arginine catabolism and polyamine metabolism in clubroot-susceptible and partially resistant Arabidopsis genotypes. *Plant Physiology*, 146: 2008-2019.
- Kadioglu, A.; Terzi, R.A.** (2007) Dehydration Avoidance Mechanism - Leaf Rolling. *The Botanical Review*, 73(4): 290-302.

- Kaplan, F.; Kopka, J.; Sung, D.Y.; Zhao, W.; Popp, M.; Porat, R.; Guy, C.L.** (2007) Transcript and metabolite profiling during cold acclimation of *Arabidopsis* reveals an intricate relationship of cold-regulated gene expression with modifications in metabolite content. *Plant Journal*, 50 (6): 967-981.
- Kazlauskienė, D.; Gavelienė, V.; Novickienė, L.** (2008) Control of anthesis and formation of reproductive organs in spring rape (*Brassica napus* L.). *Biologija*, 54 (4): 279-282.
- Kempa, S.; Rozhon, W.; Samaj, J.; Erban, A.; Baluska, F.; Becker, T.; Haselmayer, J.; Schleiff, E.; Kopka, J.; Hirt, H.; Jonak, C.** (2007) A plastid-localized glycogen synthase kinase 3 modulates stress tolerance and carbohydrate metabolism. *Plant Journal*, 49 (6): 1076-1090.
- Kempa, S.; Krasensky, J.; Dal Santo, S.; Kopka, J.; Jonak, C.** (2008) A central role of abscisic acid in stress-regulated carbohydrate metabolism. *PLoS ONE*, 3(12): e3935.
- Kevers, C.; Falkowski, M.; Tabart, J.; Defraigne, J.O.; Dommès, J.; Pincemail, J.** (2007) Evolution of antioxidant capacity during storage of selected fruits and vegetables *J. Agric. Food Chem.*, 55: 8596-8603.
- Kevers, C.; Hausman, J.-F.; Faivre-Rampant, O.; Dommès, J.; Gaspar, T.** (2008) What we have learned about the physiology of adventitious rooting of woody plants and how it relates to improvements in the practice *In: Adventitious root formation in forest trees and woody horticultural crops - from genes to applications*. Eds K. Niemi, D. Scagel.
- Knizewski, L.; Ginalska, K.; Jerzmanowski, A.** (2008) Snf2 proteins in plants: gene silencing and beyond. *Trends in Plant Science*, 13: 557-565.
- Koca, H.; Bor, M.; Ozdemir, F.; Turkan, I.** (2007) The effect of salt stress on lipid peroxidation, antioxidative enzymes and proline content of sesame cultivars. *Environmental and Experimental Botany*, 60(3): 344-351.
- Kohnen, S.; Franck, T.; Van Antwerpen, P.; Boudjeltia, K.Z.; Mouithys-Mickalad, A.; Deby, C.; Mogueilevsky, N.; Deby-Dupont, G.; Lamy, M.; Serteyn, D.** (2007) Resveratrol inhibits the activity of equine neutrophil myeloperoxidase by a direct interaction with the enzyme. *Journal of Agricultural & Food Chemistry*, 55: 8080-8087.
- Kolmos, E. and Davis, S. J.** (2007) ELF4 as a Central Gene in the Circadian Clock. *Plant Signaling and Behavior* 5: 370-372
- Kolmos, E.; Davis, S.J.** (2007) Circadian Rhythms: Rho-Related Signals in Time-Specific Light Perception. *Current Biology*, 17: 808-810.
- Kolmos, E., Schoof, H., Plümer, M., and Davis, S. J.** (2008) Structural insights into the function of the core-circadian factor TIMING OF CAB2 EXPRESSION 1 (TOC1). *J. Circ. Rhythms* 6:3
- Kooijman, E.E.; Tieleman, D.P.; Testerink, C.; Munnik, T.; Rijkers, D.T.S.; Burger, K.N.J.; de Kruijff, B.** (2007) An electrostatic/hydrogen bond switch as basis for the specific interaction of phosphatidic acid with proteins. *Journal of Biological Chemistry*, 282: 11356-11364.

- Korn, M.; Peterek, S.; Mock, H.P.; Heyer, A.G.; Hinch, D.K.** (2008) Heterosis in the freezing tolerance, and sugar and flavonoid contents of crosses between *Arabidopsis thaliana* accessions of widely varying freezing tolerance. *Plant, Cell & Environment*, 31: 813-827.
- Kusano, H.; Testerink, C.; Vermeer, J.E.M.; Tsuge, T.; Oka, A.; Shimada, H.; Munnik, T.; Aoyama, T.** (2008) The *Arabidopsis* phosphatidylinositol phosphate 5-kinase PIP5K3 is a key regulator for root hair tip growth. *Plant Cell*, 20: 367-380.
- Kusano, T.; Berberich, T.; Tateda, C.; Takahashi, Y.** (2008) Polyamines: essential factor for growth and survival. *Planta*, 228: 367-381.
- Leblanc, A.; Renault, H.; Lecourt, J.; Etienne, P.; Deleu, C.; Le Deunff, E.** (2008) Elongation changes of exploratory and root hair systems induced by ACC and AVG affect nitrate uptake and the BnNrt2.1 and BnNrt1.1 transporters genes expression in *Brassica napus*. *Plant Physiology*, 146: 1928-1940.
- Léplé, J.C.; Dauwe, R.; Morreel, K.; Storme, V.; Lapierre, C.; Pollet, B.; Naumann, A.; Kang, K.Y.; Kim, H.; Ruel, K.; Lefèbvre, A.; Joseleau, J.P.; Grima-Pettenati, J.; De Rycke, R.; Andersson-Gunnerås, S.; Erban, A.; Fehrle, I.; Petit-Conil, M.; Kopka, J.; Polle, A.; Messens, E.; Sundberg, B.; Mansfield, S.D.; Ralph, J.; Pilate, G.; Boerjan, W.** (2008) Downregulation of cinnamoyl-coenzyme A reductase in poplar: Multiple-level phenotyping reveals effects on cell wall polymer metabolism and structure. *Plant Cell*, 19 (11): 3669-3691.
- Less, H.; Galili, G.** (2008) Principal transcriptional programs regulating plant amino acid metabolism in response to abiotic stresses. *Plant Physiology*, 147: 316-930.
- Levine, L.H.; Kasahara, H.; Kopka, J.; Erban, A.; Fehrle, I.; Kaplan, F.; Zhao, W.; Littell, R.C.; Guy, C.; Wheeler, R.; Sager, J.; Mills, A.; Levine, H.G.** (2008) Physiologic and metabolic responses of wheat seedlings to elevated and super-elevated carbon dioxide. *Advances in Space Research*, 42: 1917-1928.
- Luedemann, A.; Strassburg, K.; Erban, A.; Kopka, J.** (2008) TagFinder for the quantitative analysis of gas chromatography - mass spectrometry (GC-MS) based metabolite profiling experiments. *Bioinformatics*, 24 (5): 732 -737.
- Mahajan, S.; Pandey, G.; Tuteja, N.** (2008) Calcium and Salt Stress Signaling in Plants: Shedding Light on SOS Pathway. *Archives of Biochemistry and Biophysics*, 47: 146-158.
- Maiale, S.; Marina, M.; Sánchez, D.H.; Pieckenstein, F. L.; Ruiz, O.A.** (2008) *In vitro* and *In vivo* inhibition of plant polyamine oxidase activity by polyamine analogues. *Phytochemistry*, 69: 2552-2558.
- Marco, F.; Calvo, E.; Carrasco, P.; Sanz, M.C.** (2008) Analysis of molecular markers in three different tomato cultivars exposed to ozone stress. *Plant Cell Reports*, 27: 197-207.
- Marina, M.; Maiale, S.J.; Rossi, F.R.; Rivas, E.L.; Gárriz, A.; Ruiz, O.A.; Pieckenstein, F.L.** (2008) Apoplastic polyamine oxidation plays different roles in local responses of tobacco to infection by the necrotrophic fungus *Sclerotinia sclerotiorum* and the biotrophic bacterium *Pseudomonas viridiflava*. *Plant Physiology*, 147: 2164-2178.
- Marina M.; Maiale, S.; Rossi, F.R.; Rivas, E.; Gárriz, A.; Ruiz, O.A.; Pieckenstein F.L.** (2008) Apoplastic polyamine oxidation plays different roles in local responses of tobacco to infection

by the necrotrophic fungus *Sclerotinia sclerotiorum* and the biotrophic bacterium *Pseudomonas viridiflava*. *Plant Physiology*, 147: 2164-2178.

McWatters, H. G., Kolmos, E., Hall, A., Doyle, M. R., Amasino, R. A., Gyula, P., Nagy, F., Millar, A. J., and Davis, S. J. (2007) ELF4 required for oscillatory properties of the circadian clock *Plant Phys.* 144: 391-401 (Cover image)

Medina, J.; M. L. Ballesteros, M.L.; Salinas, J. (2007) Phylogenetic and functional analysis of *Arabidopsis* RCI2 genes. *Journal of Experimental Botany*, 58: 4333–4346.

Merkys, A.; Novickienė, L.; Darginavičienė, J.; Maksimov, G. (2007) Advantages of auxin analogues as plant growth and productivity regulators. *International Journal of Environment and Pollution*, 29(4): 443-456.

Mishra, K.B.; R. Gopal, R. (2008) Detection of nickel-induced stress using laser-induced fluorescence signatures from leaves of wheat seedlings. *International J Remote Sens.*, 29: 157-173.

Moravcikova J, Libantova J, Heldak J, Salaj J, Bauer M, Matusikova I, Galova Z, Mlynarova L. (2007) Stress-induced expression of cucumber chitinase and *Nicotiana glauca* β-1,3 glucanase genes in transgenic potato plants. *Acta Physiologiae Plantarum* 29 (2): 133-141

Misra, S.; Wu, Y.; Venkataraman, G.; Sopory, S.; Tuteja, N. (2007) Heterotrimeric G-protein complex and G-protein-coupled receptor from a legume (*Pisum sativum*): role in salinity and heat stress and cross-talk with Phospholipase. *Plant Journal*, 51: 656-669.

Moschou, P.N.; Sanmartin, M.; Andriopoulou, A. H.; Rojo, E.; Sanchez-Serrano, J. J.; Roubelakis-Angelakis, K.A. (2008) Bridging the Gap Between Plant and Mammalian Polyamine Catabolism: A Novel Peroxisomal Polyamine Oxidase Responsible for a Full Back-Conversion Pathway in *Arabidopsis thaliana*. *Plant Physiology*, 147: 1845-1857.

Moschou, P.N.; Paschalidis, K.A.; Delis, I. D.; Andriopoulou, A.H.; Lagiotis, G.D.; Roubelakis-Angelakis, K.A. (2008) Salinity-Induces Exodus of Spermidine into the Apoplast which is Catabolized by Polyamine Oxidase and the Size of H₂O₂ Signature Depicts Tolerance Responses. *Plant Cell*, 20: 1708-1724.

Moschou, P.N.; Delis, I.D.; Paschalidis, K.A.; Roubelakis-Angelakis, K.A. (2008) Transgenic Tobacco Plants Over-Expressing Polyamine Oxidase Are Not Able to Cope with Oxidative Burst Generated by Abiotic Factors. *Physiologia Plantarum*, 133(2): 140-156.

Moschou P.N.; Paschalidis, K.A.; Roubelakis-Angelakis, K.A. (2008) Plant Polyamine Catabolism: The state-of the art. *Plant Signaling & Behavior*, 3(12): 1061-1067.

Naija, S.; Elloumi, N.; Jbir, N.; Ammar, S.; Kevers, C. (2008) Anatomical and biochemical changes during adventitious rooting of apple rootstocks MM 106 cultured in vitro. *Comptes-Rendus Biologie*, 331: 518-525.

Novickienė, L.; Merkys, A.; Miliuvienė, L.; Gavelienė, V.; Kazlauskienė, D.; Pakalniškytė, L. (2007) Physiological principles of modification of cereal crops growth and productivity. In:

Rural development- 2007- The third international scientific conference (proceedings II), 178-184.

- Novillo, F.; Medina, J.; Salinas, J.** (2007) Arabidopsis CBF1 and CBF3 have a different function than CBF2 in cold acclimation and define different gene classes in the CBF regulon. *Proc. Natl. Acad. Sci. USA*, 104: 21002-21007.
- Oliveira, E.; Amara, I.; Bellido, D.; Odena, M.A.; Domínguez, E.; Pagès, M.; Goday, A.** (2007) LC-MS/MS identification of Arabidopsis thaliana heat-stable seed proteins: enriching for LEA-type proteins by acid treatment. *Journal of Mass Spectrometry*, 42(11): 1485-95.
- Ondo Ovono, P.; Kevers, C.; Dommes, J.** (2007) Axillary proliferation and tuberisation of *Dioscorea cayenensis* - *D. rotundata* complex. *Plant Cell Tissue & Organ Culture*, 91: 107-114.
- Papdi, C.; Abraham, E.; Prathiba Joseph, M.; Popescula, C.; Koncz, C.; Szabados, L.** (2008) Functional identification of Arabidopsis stress regulatory genes with the Controlled cDNA Overexpression System, COS. *Plant Physiology*, 147: 528-542.
- Paradikovic, N.; Teklic, T.; Vinkovic, T.; Balicevic, R.; Lepedus, H.** (2008) Influence of K excessive soil and plant supply on Ca deficiency in pepper fruits (*Capsicum annuum* L.). *Cereal Research Communications*, 36 (5): 1563-1566.
- Parre E.; Ghars M.A.; Leprince A.S.; Thiery L.; Lefebvre D.; Bordenave M.; Richard L.; Mazars C.; Abdely C. and Saviouré A.** (2007) Calcium signaling via phospholipase C is essential for proline accumulation upon ionic but not non-ionic hyperosmotic stresses in Arabidopsis thaliana. *Plant Physiology*, 144(1): 503-512.
- Parveen, I.; Moorby, J.M.; Fraser, M.D.; Allison, G.G.; Kopka, J** (2007) Application of gas chromatography-mass spectrometry metabolite profiling techniques to the analysis of heathland plant diets of sheep. *Journal of Agricultural and Food Chemistry*, 55 (4): 1129-1138.
- Phillips, J.; Dalmay, T.; Bartels, D.** (2007) The role of small RNAs in abiotic stress. *FEBS Letters*, 581: 3592-3597.
- Phillips, J.; Bartels, D.** (2008) Dehydration tolerance in resurrection plants: Dried Flowers. *The Biochemist*, 30 (4): 14-17.
- Phillips, J.; Fischer, E.; Baron, M.; van den Dries, N.; Facchinelli, F.; Kutzer, M.; Rahmanzdeh, R.; Remus, D.; Bartels, D.** (2008) *Lindernia brevidens* - a novel desiccation tolerant vascular plant, endemic to ancient tropical rain forest. *Plant Journal*, 54(5): 938-948.
- Ramos-Diaz, A.; Brito-Argaez, L.; Munnik, T.; Hernandez-Sotomayor, S.M.** (2007) Aluminum inhibits phosphatidic acid formation by blocking the phospholipase C pathway. *Planta*, 225: 393-401.
- Reyes, J.C.; Brzeski, J.; Jerzmanowski, A.** (2007) Chromatin remodeling and histone variants in transcriptional regulation and in maintaining DNA methylation. *Annual Plant Reviews*, 29: 112-135.

- Rodríguez-Kessler, M.; Ruiz, O.A.; Maiale, S.J.; Ruiz-Herrera, J.; Jiménez-Bremont, J.F.** (2008) Alteration in polyamine metabolism of maize tumors induced by *Ustilago maydis*. *Plant Physiology and Biochemistry*, 46: 805-814.
- Röhrig, H.; Schmidt, J.; Colby, T.; Harzen, A.; Facchinelli, F.; Bartels, D.** (2008) Analysis of the *Craterostigma plantagineum* desiccation phosphoproteome using a modified metal oxide affinity chromatography procedure. *Proteomics*, 8: 3548-3560.
- Rubio, S.; Whitehead, L.; Larson, T.R.; Graham, I.A.; Rodriguez, P.L.** (2008) The Coenzyme A biosynthetic enzyme phosphopantetheine adenylyltransferase plays a crucial role for plant growth, salt/osmotic-stress resistance and seed lipid storage. *Plant Physiology*, 148: 546-556.
- Saglam, A.; Kadioglu, A.; Terzi, R.; Saruhan, N.** (2008) Leaf rolling and biochemical changes in them in post-stress emerging *Ctenanthe setosa* plants under drought conditions, *Russian J. Plant Physiol.*, 55: 48-53.
- Sampaio, P.N.; Fortes, A.M.; Cabral, J.M.S.; Pais, M.S.; Fonseca, L.P.** (2008) Production and Characterization of Recombinant Cyprosin 1 B in *Saccharomyces cerevisiae* (W303-1A) strain. *Journal of Biosciences & Bioengineering*, 105 (4): 305-312.
- Sanchez, D.H.; Lippold, F.; Redestig, H.; Hannah, M.; Erban, A., Kraemer, U., Kopka, J.; Udvardi, M.K.** (2008) Integrative functional genomics of salt acclimation in the model legume *Lotus japonicus*. *Plant Journal*, 53 (6): 973-987.
- Sanchez, D.H.; Redestig, H.; Kraemer, U.; Udvardi, M.K.; Kopka, J.** (2008) Metabolome-ionome-biomass interactions: What can we learn about salt stress by multiparallel phenotyping?. *Plant Signaling & Behavior*, 3(8): 598-600.
- Sanchez, D.H.; Siahpoosh, M.R.; Roessner, U.; Udvardi, M.K.; Kopka, J.** (2008) Plant metabolomics reveals conserved and divergent metabolic responses to salinity. *Physiologia Plantarum*, 132 (2): 209-219.
- Sannazzaro, A.; Echeverría, M.; Albertó, E. , Ruiz, O. A.; Menéndez, A.** (2007) Modulation of polyamine balance in *Lotus glaber* by salinity and arbuscular mycorrhiza. *Plant Physiology and Biochemistry*, 45 (1): 39-46.
- Sarwat, M.; Tuteja, N.** (2007) Calnexin: a versatile calcium binding integral membrane-bound chaperone of endoplasmic reticulum. *Calcium Binding Proteins*, 2(1): 36-50.
- Schaarschmidt, S.; Kopka, J.; Ludwig-Mueller, J.; Hause, B.** (2007) Regulation of arbuscular mycorrhization by apoplastic invertases: enhanced invertase activity in the leaf apoplast affects the symbiotic interaction. *Plant Journal*, 51(3): 390-405.
- Schweighofer, A.; Kazanaviciute, V.; Scheikl, E.; Teige, M.; Doczi, R.; Hirt, H.; Schwanninger, M.; Kant, M.; Schuurink, R.; Buchala, A.; Mauch, F.; Cardinale, F.; Meskiene, I.** (2007) PP2C-type Phosphatase AP2C1 Negatively Regulates MPK4 and MPK6, and Modulates Innate Immunity, Jasmonic Acid and Ethylene Levels in *Arabidopsis*. *Plant Cell*, 19: 2213-2224.
- Schweighofer, A.; Meskiene, I.** (2008) Protein phosphatases in plant growth signalling pathways. In: *Plant Growth Signalling*, L. Boegre, eds (Heidelberg: Springer-Verlag), pp. 277-297.

- Schweighofer, A.; Meskiene, I.** (2008) Regulation of stress hormones jasmonates and ethylene by MAPK pathways in plants. *Molecular BioSystems*, 4: 799 - 803.
- Sivritepe, N.; Sivritepe, H.O.; Turkan, I.; Bor, M.; Ozdemir, F.** (2008) NaCl pre-treatments mediate salt adaptation in melon plants through antioxidative system. *Seed Science & Technology*, 36(2): 360-370.
- Sivritepe, N.; Erturk, U.; Yerlikaya, C.; Turkan, I.; Bor, M.; Ozdemir, F.** (2008) Response of the cherry rootstock to water stress induced in vitro, *Biologia Plantarum*, 52(3): 573-576.
- Slama, I.; Ghnaya, T.; Messedi, D.; Hessini, K.; Labidi, N.; Saviouré, A. and Abdelly, C.** (2007) Effect of sodium chloride on the response of the halophyte species *Sesuvium portulacastrum* grown in mannitol-induced water stress. *Journal of Plant Research*, 120: 291-299.
- Slama, I.; Ghnaya, T.; Hessini, K.; Messedi, D.; Saviouré, A.; Abdelly, C.** (2007) Comparative study of mannitol and PEG osmotic stress effects on growth, proline and soluble sugars accumulation in *Sesuvium portulacastrum*. *Environmental and Experimental Botany*, 61: 10-17.
- Slama, I.; Ghnaya, T.; Saviouré, A.; Abdelly, C.** (2008) Combined effects of long-term salinity and soil drying on growth, water relations, nutrient status and proline accumulation of *Sesuvium portulacastrum*. *C.R. Biologies*, 331: 442-451.
- Slavikova, S.; Ufaz, S.; Avin-Wittenberg, T.; Levanony, H.; Galili, G.** (2008) An autophagy-associated atg8 protein is involved in the responses of Arabidopsis seedlings to hormonal controls and abiotic stresses. *Journal of Experimental Botany*, 59(14): 4029-4043.
- Smith-Espinoza, C.; Bartels, D.; Phillips, J.** (2007) GFP as a tool to monitor LEA gene promoter activity in the desiccation tolerant plant *Lindernia brevidens*. *Plant Cell Reports*, 26 (9): 1681-1688.
- Sokol, A.; Kwiatkowska, A.; Jerzmanowski, A.; Prymakowska-Bosak, M.** (2007) Up-regulation of stress-inducible genes in tobacco and Arabidopsis cells in response to abiotic stresses and ABA treatment correlates with dynamic changes in histone H3 and H4 modifications. *Planta*, 227: 245-254.
- Steinhauser, D.; Kopka, J.** (2007) Methods, applications and concepts of metabolite profiling: primary metabolism. In: *Fernie AR, Baginsky S (eds) Plant systems biology. Experimentia Supplementum Vol. 97, Verlag Birkhäuser, Basel, pp 171-194.*
- Strehmel, N.; Hummel, J.; Erban, A.; Strassburg, K.; Kopka, J.** (2008) Estimation of retention index thresholds for compound matching using routine gas chromatography-mass spectrometry based metabolite profiling experiments. *Journal of Chromatography B*, 871: 182-190.
- Sumner, L.W.; Amberg, A.; Barrett, D.; Beale, M.H.; Beger, R.; Daykin, C.A.; Fan, T.W.M.; Fiehn, O.; Goodacre, R.; Griffin, J.L.; Hankemeier, T.; Hardy, N.; Harnly, J.; Higashi, R.; Kopka, J.; Lane, A.N.; Lindon, J.C.; Marriott, P.; Nicholls, A.W.; Reily, M.D.; Thaden, J.J.; Viant, M.R.** (2007) Proposed minimum reporting standards for chemical analysis. *Metabolomics*, 3(3): 211-221.

- Swiezewski, S.; Crevillen, P.; Liu, F.; Ecker, J.R.; Jerzmanowski, A.; Dean, C.** (2007) Small RNA-mediated chromatin silencing directed to the 3' region of the Arabidopsis gene encoding the developmental regulator, FLC. *Proc. Natl. Acad. Sci. USA*, 104: 3633-3638.
- Székely, G.; Ábrahám, E.; Cséplő, A.; Rigó, G.; Zsigmond, L.; Csiszár, J.; Ayaydin F.; Strizhov, N.; Jásik, J.; Schmelzer, E.; Koncz, C.; Szabados, L.** (2008) Duplicated P5CS genes of Arabidopsis perform distinct regulatory functions in proline biosynthesis. *Plant Journal*, 53: 11-28.
- Tabart, J.; Kevers, C.; Pincemail, J.; Defraigne J-O.; Dommes J.** (2008) Comparative antioxidant capacities of phenolic compounds measured by various tests. *Food Chemistry*, 113(4): 1226-1233.
- Tabart, J.; Kevers, C.; Sipel, A.; Pincemail, J.; Defraigne, J.O.; Dommes, J.** (2007) Optimisation of extraction of phenolics and antioxidants from black currant leaves and buds and of stability during storage. *Food Chemistry*, 105: 1268-1275.
- Tateda, C.; Ozaki, R.; Onodera, Y.; Takahashi, Y.; Yamaguchi, K.; Berberich, T.; Koizumi, N.; Kusano, T.** (2008) NtbZIP60 - an endoplasmic reticulum-localized transcription factor plays a role in defence response against bacterial pathogen in *Nicotiana tabacum*. *Journal of Plant Research*, 121(6): 603-611.
- Teklic, T.; Engler, M.; Cesar, V.; Lepedus, H.; Paradikovic, N.; Loncaric, Z.; Stolf, I.; Marotti, T.; Mikac, N.; Zarkovic, N.** (2008): Influence of excess copper on lettuce (*Lactuca sativa* L.) grown in soil and nutrient solution. *Journal of Food, Agriculture & Environment*, 6 (3&4): 439-444.
- Testerink, C.; Larsen, P.B.; van der Does, D.; van Himbergen, J.A.J.; Munnik, T.** (2007) Phosphatidic acid binds to and inhibits the activity of Arabidopsis CTR1. *Journal of Experimental Botany*, 14: 3905–3914.
- Testerink, C.; Larsen, P.B.; McLoughlin, F.; van der Does, D.; van Himbergen, J.A.J.; Munnik, T.** (2008) PA: a stress-induced short cut to switch-on ethylene signalling by switching-off CTR1?. *Plant Signaling & Behavior*, 3: 681-683.
- Tuteja, N.** (2007) Mechanisms of high salinity tolerance in plants. *Methods in Enzymology: Osmosensing and Osmosignaling*, 428: 419-438.
- Tuteja, N.; Mahajan, S.** (2007) Further characterization of calcineurin B-like protein and its interacting partner CBL-interacting protein kinase from *Pisum sativum*. *Plant Signaling & Behavior*, 2(5): 358-361.
- Tuteja, N.** (2007) Abscisic acid and abiotic stress signalling. *Plant Signaling & Behavior*, 2(3): 135-138.
- Tuteja, N.** (2007) How pea phospholipase C functions in salinity stress tolerance. *ISB News Report Virginia Tech USA (Agricultural and environmental Biotechnology)*, 4-7.
- Tuteja, N.** (2007) Pea heterotrimeric G-proteins confer salinity and heat stress tolerance. *ISB News Report Virginia Tech USA (Agricultural and environmental Biotechnology)*, 7-9.

- Tuteja, N.; Mahajan, S.** (2007) Calcium signaling network in plants: an overview. *Plant Signaling & Behavior*, 2(2): 79-85.
- Tuteja, N.; Sopory, S.K.** (2008) Chemical signaling under abiotic stress environment in plants. *Plant Signaling & Behavior*, 3(8): 525-536.
- Tuteja, N.; Sopory, S.K.** (2008) Plant Signaling in Stress: G-Protein Coupled Receptors, Heterotrimeric G-Proteins and Signal Coupling via Phospholipases. *Plant Signaling & Behavior*, 3(2): 79-86.
- Vaculkova E, Moravcikova J, Matusikova I, Bauer M, Libantova J.** (2007) A modified low copy number binary vector pUN for *Agrobacterium*-mediated plant transformation. *Biologia Plantarum* 51(3): 538-540
- Vahisalu, T.; Kollist, H.; Wang, Y.F.; Chan, W.Y.; Valerio, G.; Lamminmäki, A.; Brosche, M.; Moldau, M.; Desikan, R.; Schroeder, J.I.; Kangasjärvi, J.** (2008) SLAC1 is required for plant guard cell S-type anion channel function in stomatal closure. *Nature*, 452: 487-491.
- Van Leeuwen, W.; Vermeer, J.E.M.; Gadella, Jr.T.W.J, Munnik, T.** (2007) Visualisation of phosphatidylinositol 4,5-bisphosphate in the plasma membrane of suspension-cultured tobacco BY-2 cells and whole Arabidopsis seedlings. *Plant Journal*, 52: 1014-1026.
- Verslues, P.E.; Batelli, G.; Grillo, S.; Agius, F.; Yong-Sig, K.; Zhu, J.; Agarwal, M.; Zhu, J.K.** (2007) Interaction of SOS2 with NDPK2 and catalases reveals a point of connection between salt stress and H₂O₂ signaling in Arabidopsis. *Molecular and Cellular Biology*, 27(22): 7771-7780.
- Vinkovic, T.; Paradikovic, N.; Lepedus, H.; Stolfa, I.; Teklic, T.** (2008) Oxidative stress in radish plants grown on soils with different Cu and Pb level. *Cereal Research Communications*, 36 (5): 1519-1522.
- Vucica, Y.; Diener, D.R.; Rosenbaum, J.L.; Koutoulis, A.** (2007) An ultrastructural and biochemical analysis of a new *Chlamydomonas* mutant affecting the central pair apparatus. *Protoplasma*, 232: 121-130.
- Welter, L.; Göktürk-Baydar, N.; Akkurt, M.; Maul, E.; Eibach, R.; Töpfer, R.; Zyprian, E.** (2007) Genetic mapping and localization of quantitative trait loci affecting fungal disease resistance and leaf morphology in grapevine (*Vitis vinifera* L). *Molecular Breeding*, 20: 359-374.
- Yazıcı I.; Turkan I.; Sekmen A.H. and Demiral T.;** (2007). Salinity tolerance of purslane (*Portulaca oleracea* L.) is achieved by enhanced antioxidative system, lower level of lipid peroxidation and proline accumulation. *Environmental and Experimental Botany*, 61(1): 49-57.
- Yin, X.- J., Volk, S., Ljung, K., Mehlmer, N., Dolezal, K., Hanano, S., □Davis, S. J., Schmelzer, E., Sandberg, G., Pickart, C., Teige, M., Palme, K., Bachmair, A.** (2007) Ubiquitin Lysine 63 chain forming ligases regulate apical dominance in Arabidopsis *Plant Cell* 19:1898-1911

- Zapryanova, N.; Moyankova, D.; Popandova, S.; Georgieva, T.; D. Djilianov, D. (2007)**
Biological melioration of solonetz soils using various poplar genotypes. *Soil Science Agrochemistry and Ecology*, 2: 17-23.
- Zapryanova, N.; Moyankova, D.; Popandova, S.; Georgieva, T.; D. Djilianov, D. (2007)**
Physiological reaction of poplar genotypes during biological melioration of solonetz soils. *Plant Sciences (Bulg.)*, 44: 473-480.
- Zhang X.; Wollenweber, B.; Jiang D.; Liu, FL.; Zhao, J. (2008)** Water deficits and heat shock effects on photosynthesis of a transgenic *Arabidopsis thaliana* constitutively expressing ABP9, a bZIP transcription factor. *Journal of Experimental Botany*, 59: 839-848.
- Zonia, L.; Munnik, T. (2007)** Life under pressure: Hydrostatic pressure in cell growth and function. *Trends in Plant Science*, 12: 90-97.
- Zonia, L.; Munnik, T. (2008)** Still life: Pollen tube growth observed in millisecond resolution. *Plant Signaling & Behavior*, 3: 836-838.
- Zonia, L.; Munnik, T. (2008)** Visualization of vesicle trafficking dynamics in growing tobacco pollen tubes and identification of zones of endocytosis and exocytosis. *Journal of Experimental Botany*, 59: 861-873.
- Zsigmond, L.; Rigó, G.; Székely, G.; Ötvös, K.; Szarka, A.; Darula, Z.; Medzihradzky, K.F.; Koncz, C.; Koncz, Z.; Szabados, L. (2008)** The Arabidopsis PPR domain protein SAS1 connects abiotic stress responses to mitochondrial electron transport. *Plant Physiology*, 146: 1721-1733.
- Zur, I.; Dubas, E.; Golemic, E.; Szechynska-Hebda, M.; Janowiak, F.; Wędzony, M. (2008)** Stress-induced changes important for effective androgenic induction in isolated microspore culture of triticale (*xTriticosecale* Wittm.). *Plant Cell Tissue & Organ Culture*, 94: 319-328.
- Zuther, E.; Koehl, K.; Kopka, J. (2007)** Comparative metabolome analysis of the salt response in breeding cultivars of rice. In: *Jenks MA, Hasegawa PM, Jain SM (eds) Advances in molecular breeding toward drought and salt tolerant crops. Springer-Verlag, Berlin, Heidelberg, New York, pp 285-315.*

Published papers from 2009

- Ahsan, N., Renaut, J., Komatsu, S.** (2009) Recent developments in the application of proteomics to the analysis of plant responses to heavy metals. *Proteomics*, 9 (10), pp. 2602-2621
- Allwood, J.W.; Erban, A.; de Koning, S.; Dunn, W.B.; Luedemann, A.; Lommen, A.; Kay, L.; Löscher, R.; Kopka, J.; Goodacre, R.** (2009) Inter-laboratory reproducibility of fast gas chromatography–electron impact–time of flight mass spectrometry (GC–EI–TOF/MS) based plant metabolomics. *Metabolomics*, 5(4): 479-496
- Angelovici, R.; Fait, A.; Zhu, X.; Szymanski, J.; Feldmesser, E.; Fernie, A.R.; Galili, G.** (2009) Deciphering transcriptional and metabolic networks associated with lysine metabolism during Arabidopsis seed development. *Plant Physiology*, 151: 2058-2072.
- Archacki, R.; Sarnowski, T.; Puzio, J.; Brzeska, K.; Prymasowska-Bosak, M.; Koncz, C.; Jerzmanowski, A.** (2009) Genetic analysis of functional redundancy of BRM ATPase and ATSWI3C subunits of Arabidopsis SWI/SNF chromatin remodelling complexes. *Planta*, 229: 1281-1292.
- Arisz, S.A.; Testerink, C.; Munnik, T.** (2009) Plant PA signalling via diacylglycerol kinase. *Biochimica and Biophysica Acta*, 1791: 869-875.
- Boikoglou, E., and Davis, S. J.** (2009) Signaling in the Circadian Clock. *Signaling in Plants (F. Baluska and S. Mancuso, eds.) Springer Publishers, Berlin Heidelberg, Germany.* 261-285
- Bargmann, B.O.R.; Arisz, S.A.; Laxalt, A.M.; ter Riet, B.; van Schooten, B.; Merquiol, E.; Testerink, C.; Haring, M.A.; Bartels, D.; Munnik, T.** (2009) Multiple PLDs required for high salinity- and water deficit tolerance in plants. *Plant Cell Physiology*, 50: 78-89.
- Bargmann, B.O.R.; Laxalt, A.M.; ter Riet, B.; Testerink, C.; Merquiol, E.; Mosblech, A.; Leon-Reyes, A.H.; Pieterse, C.M.; Haring, M.A.; Heilmann, I.; Bartels, D.; Munnik, T.** (2009) Reassessing the role of phospholipase D in the Arabidopsis wounding response. *Plant Cell Environment*, 32: 837-850.
- Blanco, F.; Salinas, P.; Cecchini, N.M.; Jordana, X.; Van Hummelen, P.; Alvarez, M.E.; Holuigue, L.** (2009) Early genomic responses to salicylic acid in Arabidopsis. *Plant Molecular Biology*, 70: 79-102.
- Boikoglou, E.; Davis, S.J.** (2009) Signaling in the Circadian Clock. In: *Signaling in Plants (F. Baluska and S. Mancuso, eds.) Springer Publishers Berlin Heidelberg, Germany,* 261-285.
- Cassán, F.; Maiale, S.; Masciarelli, O.; Vidal, O.; Luna, V.; Ruiz, O.A.** (2009) Cadaverine production by *Azospirillum brasilense* and their possible role in plant growth promotion and osmotic stress mitigation. *European Journal of Soil Biology*, 45 (1): 12-19.
- Cecchini, N.; Monteoliva, M.; Blanco, F.; Holuigue, L.; Alvarez, M.E.** (2009) Features of basal and race-specific defences in photosynthetic Arabidopsis thaliana suspension cultured cells. *Molecular Plant Pathology*, 10: 305-310.
- Chaves, I; Pinheiro, C; Paiva J.A.P; Planchon, S; Sergeant, K; Renaut, J; Graça, J.A; Costaa, G; Coelho, A.V; Pinto Ricardo, C.P;** (2009) Proteomic evaluation of wound-healing processes in potato (*Solanum tuberosum* L.) tuber tissue. *Proteomics*, 9 (17), pp. 4154-4175

- Cosio, C.; Vuillemin, L.; De Meyer, M.; Kevers, C.; Penel, C.; Dunand, C.** (2009) An anionic class III peroxidase from zucchini may regulate hypocotyl elongation through its auxin oxidase activity. *Planta*, 229: 823-836.
- Costa, A., Di Giacomo, M, Massarelli, I., De Palma, M., Leone, A., Grillo, S.** (2009): Isolation and characterization of a water stress-induced elongation factor 1 alpha from *Solanum tuberosum*. *Plant Biosystems in press*)
- Cuevas, J. C.; López-Cobollo, R.; Alcázar, R.; Koncz, C.; Altabella, T.; Salinas, J.; Tiburcio, A. F.; Ferrando, A.** (2009) Putrescine as a signal to modulate the indispensable ABA increase under cold stress. *Plant Signaling & Behavior*, 4: 219-220.
- Darwish, E.; Testerink, C.; Khaleil, M.; El-Shihy, O.; Munnik, T.** (2009) Phospholipid-signaling responses in salt stressed rice leaves. *Plant Cell Physiology*, 50: 986-997.
- Davis, A. M., Hall, A., Millar, A. J., Darrah, C., and Davis, S. J.** (2009) Streamlined sub-protocols for floral-dip transformation and selection of transformants in *Arabidopsis thaliana*. *Plant Methods* 5:3
- Davis, S. J.** (2009) Integrating hormones into the floral-transition pathway of *Arabidopsis thaliana*. *Plant Cell Environ.* 32:1201-1210
- Delaplace, P., Fauconnier, M.-L., Sergeant, K., Dierick, J.-F., Oufir, M., Van Der Wal, F., America, A.H.P., Renaut, J., Hausman, J.-F., Du Jardin, P.** (2009) Potato (*Solanum tuberosum* L.) tuber ageing induces changes in the proteome and antioxidants associated with the sprouting pattern. *Journal of Experimental Botany*, 60 (4), pp. 1273-1288.
- Fast-Seefeldt, H.; Wollenweber, B.; Møller-Jespersen, B.; Balling-Engelsen, S.** (2009) Accumulation of mixed linkage (1→3)(1→4)-D-β-glucan during grain filling in barley – A vibrational spectroscopy study. *Journal of Agricultural and Food Chemistry*, 49: 24-31.
- Frei, U.; Wollenweber, B.; Lübberstedt, T.** (2009) PolyMin: software for identification of the minimum number of polymorphisms required for haplotype and genotype differentiation. *BMC Bioinformatics*, 10: 176. doi:10.1186/1471-2105-10-17
- Fujii, H.; Chinnusamy, V.; Rodrigues, A.; Rubio, S.; Antoni, R.; Park, S.Y.; Cutler, S.R.; Sheen, J.; Rodriguez, P.L. and Zhu, J-K.** (2009) In vitro reconstitution of an ABA signalling pathway. *Nature*, 462(7273): 660-664.
- Führs, H.; Götze, S.; Specht, A.; Erban, A.; Gallien, S.; Heintz, D.; Van Dorsselaer, A.; Kopka, J.; Braun, H.P.; Horst, W.J.** (2009) Characterization of leaf apoplastic peroxidases and metabolites in *Vigna unguiculata* in response to toxic manganese supply and silicon. *Journal of Experimental Botany*, 60(6): 1663-1678.
- Gill, S.S.; Tuteja, N.** (2010) Polyamines and abiotic stress tolerance in plants. *Plant Signaling & Behavior*, 5(1): 25-33.
- Gill SS; Tuteja N** (2010) Polyamines and abiotic stress tolerance in plants. *Plant Signaling and Behaviour* 5:1, 1-8

- Giorno, F., Wolters-Arts, M., Grillo, S., Scharf, K.D., Vriezen, W.H., Mariano, C.** (2009): Developmental and heat stress-regulated expression of HsfA2 and small heat shock proteins in tomato anthers. *J Exp Bot.* 2009 doi:10.1093/jxb/erp316
- Gudleifsson, B.E.** (2009) Ice encasement damage on grass crops and alpine plants in Iceland - Impact of climate change. In: *Plant Cold Hardiness - From the Laboratory to the Field.* LW Gusta, ME Wisniewski and KK Tanino (eds). CABI. 163-172.
- Hernandez, G.; Valdes-Lopez, O.; Ramirez, M.; Goffard, N.; Weiller, G.; Aparicio-Fabre, R.; Fuentes, S.I.; Erban, A.; Kopka, J.; Udvardi, M.K.; Vance, C.P.** (2009) Global changes in the transcript and metabolic profiles during symbiotic nitrogen fixation in phosphorus-stressed common bean plants. *Plant Physiology*, 151(3): 1221-1238.
- Jiang, D.; Yue, H.; Wollenweber, B.; Tan, W.; Dai, T.; Jing, Q.; Cao, W.** (2009) Effects of post-anthesis drought and waterlogging on accumulation of high molecular-weight glutenin subunits and glutenin macro polymer content in wheat grain. *Journal of Agronomy and Crop Science*, 195 (2): 89-97.
- Joshi, A.; Dang, H.Q.; Vaid, N.; Tuteja, N.** (2009) Isolation of high salinity stress tolerant genes from *Pisum sativum* by random overexpression in *Escherichia coli* and their functional validation. *Plant Signaling & Behavior*, 4(5): 400-412.
- Kalamaki, M.S.; Alexandrou, D.; Lazari, D.; Merkouropoulos, G.; Fotopoulos, V.; Pateraki, I.; Carrillo, A.L.; Cavetas, M.R.; Aggelis, A.; Kanellis, A.K.** (2009). Over-expression of a tomato N- acetyl-glutamate synthase gene (SINAGS1) in *Arabidopsis thaliana* results in high ornithine levels and increased tolerance in salt and drought stresses. *Journal of Experimental Botany*, 60: 1859-1871.
- Kempa, S.; Hummel, J.; Schwemmer, T.; Pietzke, M.; Strehmel, N.; Wienkoop, S.; Kopka, J.; Weckwerth, W.** (2009) An automated GCxGC-TOF-MS protocol for batch-wise extraction and alignment of mass isotopomer matrixes from differential C-13-labelling experiments: a case study for photoautotrophic-mixotrophic grown *Chlamydomonas reinhardtii* cells. *Journal of Basic Microbiology*, 49(1): 82-91.
- Kieffer, P., Schröder, P., Domes, J., Hoffmann, L., Renaut, J., Hausman, J.-F.** (2009) Proteomic and enzymatic response of poplar to cadmium stress. *Journal of Proteomics*, 72 (3), pp. 379-396.
- Kieffer, P., Planchon, S., Oufir, M., Ziebel, J., Domes, J., Hoffmann, L., Hausman, J.-F., Renaut, J.** (2009) Combining proteomics and metabolite analyses to unravel cadmium stress-response in poplar leaves. *Journal of Proteome Research*, 8 (1), pp. 400-417.
- Kolmos, E.; Nowak, M.; Werner, M.; Fischer, K.; Schwarz, G.; Mathews, S.; Schoof, H.; Nagy, F.; Bujnicki, J. M.; Davis, S. J.** (2009) Integrating ELF4 into the circadian system through combined structural and functional studies. *HFSP Journal*, 3: 350-366.
- Kumar, M.; Yadav, V.; Tuteja, N.; Johri, A.K.** (2009) Antioxidant enzyme activities in maize plants colonized with *Piriformospora indica*. *Microbiology*, 155: 780-790.
- Kuramata, M.; Masuya, S.; Takahashi, Y.; Kitagawa, E.; Inoue, C.; Ishikawa, S.; Youssefian, S.; Kusano, T.** (2009) Novel cysteine-rich peptides from *Digitaria ciliaris* and *Oryza sativa*

enhance tolerance to cadmium by limiting its cellular accumulation. *Plant Cell Physiology*, 50: 106-117.

Libantova J, Kamarainen T, Moravcikova J, Matusikova I, Salaj, J. (2009) Detection of chitinolytic enzymes with different substrate specificity in tissues of intact sundew (*Drosera rotundifolia* L.). *Molecular Biology Reports* 36 (5): 851-856.

Lugan, R.; Niogret, M.F.; Kervazo, L.; Larher, F.R.; Kopka, J.; Bouchereau, A. (2009) Metabolome and water status phenotyping of *Arabidopsis* under abiotic stress cues reveals new insight into ESK1 function. *Plant Cell and Environment*, 32(2): 95-108.

Matsuda, T.; Kuramata, M.; Takahashi, Y.; Kitagawa, E.; Youssefian, S.; Kusano, T. (2009) A novel plant cysteine-rich peptide family conferring cadmium tolerance to yeast and plants. *Plant Signaling & Behavior*, 4: 419-421.

Mhadhbi, H.; Fotopoulos, V.; Djebalin, N.; Jebara, M.; Polidoros, A.N.; Aouani, M.E. (2009) Behaviours of *Medicago truncatula*-*Sinorhizobium meliloti* symbioses under osmotic stress in relation with symbiotic partner input: effects on nodule functioning and protection. *Journal of Agronomy and Crop Science*, 195: 225-231.

Mishkind, M.; Vermeer, J.E.M.; Darwish, E.; Munnik, T. (2009) Heat stress activates phospholipase D and triggers PIP2 accumulation at the plasma membrane and nucleus. *Plant Journal*, 60: 10-21.

Mitsuya, Y.; Takahashi, Y.; Berberich, T.; Miyazaki, A.; Matsumura, H.; Takahashi, H.; Terauchi, R.; Kusano, T. (2009) Spermine signalling plays a significant role in the defence response of *Arabidopsis thaliana* to cucumber mosaic virus. *Journal of Plant Physiology*, 166: 626-643.

Mrosk, C.; Forner, S.; Hause, G.; Küster, H.; Kopka, J.; Hause, B. (2009) Composite *Medicago truncatula* plants harbouring *Agrobacterium rhizogenes*-transformed roots reveal normal mycorrhization by *Glomus intraradices*. *Journal of Experimental Botany*, 60(13): 3797-3807.

Munnik, T.; Testerink, C. (2009) Plant Phospholipid Signalling - 'in a nutshell'. *Journal of Lipid Research*, 50: S260-S265.

Naija, S.; Elloumi, N.; Ammar, S.; Kevers, C.; Dommès, J. (2009) Involvement of polyamines in the adventitious rooting of micropropagated shoots of the apple rootstock MM106. *In Vitro Cellular & Developmental Biology – Plant*, 45(1): 83-91.

Nar, H.; Saglam, A.; Terzi, R.; Varkonyi, Z.; Kadioglu, A. (2009) Leaf rolling and photosystem II efficiency in *Ctenanthe setosa* exposed to drought stress. *Photosynthetica*, 47(3): 429-436.

Novickienė, L.; Miliuvienė, L.; Gavelienė, V.; Kazlauskienė, D.; Butkutė, B. (2009) The biotechnological tools of winter oilseed rape (*Brassica napus* L.) productivity and quality control. *GCIRC Bulletin*, 25: 2.

Ondo Ovono, P.; Kevers, C.; Dommès, J. (2009) The role of sugars on *in vitro* tuber formation and sprouting in yam (*Dioscorea cayenensis-D rotundata* complex). *Plant Cell Tissue & Organ Culture*, 99: 55-59.

- Park, S.Y.; Fung, P.; Nishimura, N.; Jensen, D.R.; Fujii, H.; Zhao, Y.; Lumba, S.; Santiago, J.; Rodrigues, A.; Chow, T.S.; Alfred, S.E.; Bonetta, D.; Finkelstein, R.; Provart, N.J.; Desveaux, D.; Rodriguez, P.L.; McCourt, P.; Zhu, J.K., Schroeder, J.I.; Volkman, B.F.; Cutler, S.R.** (2009) Abscisic acid inhibits type 2C protein phosphatases via the PYR/PYL family of ABA-binding START proteins. *Science*, 324: 1068-1071.
- Pedreschi, R.; Franck, C.; Lammertyn, J.; Erban, A.; Kopka, J.; Hertog, M.; Verlinden, B.; Nicolai, B.** (2009) Metabolic profiling of Conference pears under low oxygen stress. *Postharvest Biology and Technology*, 51(2): 123-130.
- Rao, J.L.U.M.; Reddy, P.S.; Mishra, R.N.; Gupta, D.; Sahal, D.; Tuteja, N.; Sopory, S.K.; Reddy, M.K.** (2010) Thermo and pH stable ATP-independent chaperone activity of heat-inducible Hsp70 from Pennisetum glaucum. *Plant Signaling & Behavior*, 5(2): 20-32.
- Renaut, J., Bohler, S., Hausman, J.-F., Hoffmann, L., Sergeant, K., Ahsan, N., Jolivet, Y., Dizengremel, P.** (2009) The impact of atmospheric composition on plants: A case study of ozone and poplar. *Mass Spectrometry Reviews*, 28 (3), pp. 495-516.
- Rodrigues, A.; Santiago, J.; Rubio, S.; Saez, A.; Osmont, K.S.; Gadea, J.; Hardtke, C.S.; Rodriguez, P.L.** (2009) The short-rooted phenotype of the brevis radix mutant partly reflects root ABA hypersensitivity. *Plant Physiology*, 149: 1917-1928.
- Rodriguez, A.; Maiale, S.; Menéndez, A.; Ruiz, O.A.** (2009) Polyamine oxidase activity contributes to sustain maize leaf elongation under saline stress. *Journal of Experimental Botany*, 60: 4249-4262.
- Rodriguez-Milla, M.A.; Salinas, J.** (2009) Prefoldins 3 and 5 play an essential role in Arabidopsis tolerance to salt stress. *Molecular Plant*, 2: 526-534.
- Rubio, S.; Rodrigues, A.; Saez, A.; Dizon, M.B.; Galle, A.; Kim, T.; Santiago, J.; Flexas, J.; Schroeder, J.I.S.; Rodriguez, P.L.** (2009) Triple loss-of-function of protein phosphatases type 2C leads to partial constitutive response to endogenous ABA. *Plant Physiology*, 150: 1345-1355.
- Saez, A.; Rodrigues, A.; Santiago, J.; Rubio, S. and Rodríguez, P.L.** (2008) HAB1-SWI3B interaction reveals a link between abscisic acid signaling and putative SWI/SNF chromatin remodeling complexes. *Plant Cell*, 20: 2972-2988.
- Sagor, G.H.M.; Cong, R.Z.; Berberich, T.; Takahashi, H.; Takahashi, Y.; Kusano, T.** (2009) Spermine signaling in defense reaction against avirulent viral pathogen in *Arabidopsis thaliana*. *Plant Signaling & Behavior*, 4: 316-318.
- Santiago, J.; Rodrigues, A.; Saez, A.; Rubio, S.; Antoni, R.; Park, S.Y.; Dupeux, F.; Marquez, J.A.; Cutler, S.R. and Rodriguez, P.L.** (2009) Modulation of drought resistance by the abscisic acid-receptor PYL5 through inhibition of clade A PP2Cs. *Plant Journal*, 60: 575-588.
- Santiago, J.; Dupeux, F.; Round, A.; Antoni, R.; Park, S.-Y.; Jamin, M.; Cutler, S.R.; Rodriguez, P.L.; Marquez, J.A.** (2009) The abscisic acid receptor PYR1 in complex with abscisic acid. *Nature*, 462: 665-668.

- Saruhan, N.; Terzi, R.; Sağlam, A.; Kadioğlu, A.** (2009) The Relationship between Leaf Rolling and Ascorbate-Glutathione Cycle Enzymes in Apoplastic and Symplastic Areas of *Ctenanthe setosa* Subjected to Drought Stress. *Biological Research*, 42: 315-326.
- Schapiro, A.L.; Voigt, B.; Jasik, J.; Rosado, A.; Lopez-Cobollo, R.; Menzet, D.; Salinas, J.; Mancuso, S.; Valpuesta, V.; Baliska, F.; Botella, M.A** (2008) Arabidopsis Synaptotagmin 1 is required for the maintenance of plasma membrane integrity and cell viability. *Plant Cell*, 20: 3374-3388.
- Seekin, B.; Sekmen, A.H.; Turkan, I.** (2009) An enhancing effect of exogenous mannitol on the antioxidant enzyme activities in roots of wheat under salt stress. *Journal of Plant Growth Regulation*, 28(1): 12-20.
- Sergeant, K., Pinheiro, C., Hausman, J.-F., Ricardo, C.P., Renaut, J.**(2009) Taking advantage of nonspecific trypsin cleavages for the identification of seed storage proteins in cereals, *Journal of Proteome Research*, 8 (6), pp. 3182-3190
- Sunderlikova V , Salaj J, Matusikova I, WilhelmE.** (2009) Isolation and characterization of an embryo-specific Em-like gene of pedunculate oak (*Quercus robur* L.) and its temporal and spatial expression patterns during somatic and zygotic embryo development. *Trees* 23: 135–144.
- Šunderlíková V, Salaj J, Kopecky D, Salaj T, Wilhelm E, Matušíková I.** (2009) Dehydrin genes and their expression in recalcitrant oak (*Quercus robur*) embryos, *Plant Cell Reports* 28 (7): 1011-21.
- Takahashi, Y.; Berberich, T.; Kanzaki, H.; Matsumura, H.; Saitoh, H.; Kusano, T.; Terauchi, R.** (2009) Serine palmitoyltransferase, the first step enzyme in sphingolipid biosynthesis, is involved in non-host resistance. *Molecular Plant-Microbe Interactions*, 22: 31-38.
- Takahashi, Y.; Berberich, T.; Kanzaki, H.; Matsumura, H.; Saitoh, H.; Kusano, T.; Terauchi, R.** (2009) Unraveling the roles of sphingolipids in plant innate immunity. *Plant Signaling & Behavior*, 4: 536-538.
- Tateda, C.; Yamashita, K.; Takahashi, F.; Kusano, T.; Takahashi, Y.** (2009) Plant voltage-dependent anion channels are involved in host defense against *Pseudomonas cichorii* and in Bax-induced cell death. *Plant Cell Reports*, 28: 41-51.
- Terzi, R.; Saruhan, N.; Sağlam, A.; Nar, H.; Kadioğlu, A.** (2009) Photochemical Efficiency of Photosystem II (Functionality) and Some Antioxidant Enzyme Changes during Leaf Rolling in Post-Stress Emerging *Ctenanthe setosa* Exposed To Water Deficit Stress. *Acta Biologica Hungarica*, 60(4): 417-431.
- Tuteja, N.** (2009) Signaling through G protein coupled receptors. *Plant Signaling & Behavior*, 4(10): 1-6.
- Tuteja, N.** (2009) Integrated Calcium Signaling in Plants, In: *Signaling in Plants*, edited by Frantisek Baluska and Stefano Mancuso, Springer-Verlag, Heidelberg, Germany. Pp. 29-49. (DOI: 10.1007/978-3-540-89228-1_2).

- Tuteja, N.** (2009) Cold, salt and drought stress, In: *Plant Stress Biology: From Genomics towards System Biology*, Edited by Heribert Hirt, WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany, pp 137-159. (ISBN: 978-3-527-32290-9).
- Tuteja, N.** (2009) Overexpression of a helicase imparts high salinity tolerance to plants. *Methods Molecular Biology*, 587: 377-387.
- Tuteja, N.; Ahmad, P.; Panda, B.B.; Tuteja, R.** (2009) Genotoxic Stress in Plants: Shedding Light on DNA Damage, Repair and DNA Repair Helicases. *Mutation Research Review*, 681: 134-149.
- Tzin, V.; Malitsky, S.; Aharoni, A.; Galili, G.** (2009) Expression of a bacterial bi-functional chorismate mutase/prephenate dehydratase modulates primary and secondary metabolism associated with aromatic amino acids in *Arabidopsis*. *Plant Journal*, 60: 156-167.
- Van Dongen, J.T.; Fröhlich, A.; Ramírez-Aguilar, S.J.; Schauer, N.; Fernie, A.R.; Erban, A.; Kopka, J.; Clark, J.; Langer, A.; Geigenberger, P.** (2009) Transcript and metabolite profiling of the adaptive response to mild decreases in oxygen concentration in the roots of *Arabidopsis* plants. *Annals of Botany*, 103(2): 269-280.
- Vermeer, J.E.M.; Thole, J.M.; Goedhart, J.; Nielsen, E.; Munnik, T.; Gadella, T.W.J.** (2009) Visualisation of PtdIns4P dynamics in living plant cells. *Plant Journal*, 57: 356-372.
- Vlad, F.; Rubio, S.; Rodrigues, A.; Sirichandra, C.; Belin, C.; Robert, N.; Leung, J.; Rodriguez, P.L. Laurière, C Merlot, S.** (2009) Protein Phosphatases 2C Regulate the Activation of the Snf1 Related Kinase OST1 by Abscisic Acid in *Arabidopsis*. *Plant Cell*, 21(10): 3071-3084.
- Wang L, Shang H, Liu Y, Zheng M, Wu R, Phillips J, Bartels D, Deng X.** (2009) A role for a cell wall localized glycine-rich protein in dehydration and rehydration of the resurrection plant *Boea hygrometrica*. *Plant Biol (Stuttg)*. 2009 Nov;11(6):837-848.
- Whittock, S.; Leggett, G.; Jakse, J.; Javornik, B.; Carling, J.; Kilian, A.; Matthews, P.D.; Probasco, G.; Henning, J.A.; Darby, P.; Cerenak, A.; Koutoulis, A.** (2009) Use of Diversity Array Technology (DArT) for genotyping of *Humulus lupulus* L. *Acta Horticulturae*, 668: 41-46.
- Willige BC, Kutzer M, Tebartz F, Bartels D** (2009) Subcellular localization and enzymatic properties of differentially expressed transketolase genes isolated from the desiccation tolerant resurrection plant *Craterostigma plantagineum*. *Planta*. 2009 Feb;229(3):659-666.
- Winning, H.; Viereck, N.; Wollenweber, B.; Larsen, F.H.; Jacobsen, S.; Søndergaard, I.; Engelsen, S.B.** (2009) Exploring abiotic stress on asynchronous protein metabolism in single kernels of wheat studied by NMR spectroscopy and chemometrics. *Journal of Experimental Botany*, 60: 291-300.
- Zonia, L.; Munnik, T.** (2009) Uncovering hidden treasures in pollen tube growth mechanics. *Trends in Plant Science*, 14: 318-327.

Papers in press

Ci, D.; Jiang, D.; Wollenweber, B.; Dai, T.; Jing, Q.; Cao, W. (2009) Genetic variance in cadmium tolerance and accumulation in wheat materials differing in ploidy at seedling stage. *Journal of Agronomy and Crop Science, In press.*

Ci, D.; Jiang, D.; Wollenweber, B.; Dai, T.; Jing, Q.; Cao, W. (2009) Cadmium stress in wheat seedlings: growth, cadmium accumulation and photosynthesis. *Acta Physiologia Plantarum, In press.*

Domagalska, M. A., Nagy, F., and Davis, S. J. Genetic analyses between gibberellin, abscisic acid, and brassinosteroids in the control of flowering time in *Arabidopsis thaliana*. (PLOS ONE, provisional)

Escaray, F.; Collado Rosique, F.J.; Scambato, A.A.; Bilenca, D.; Carrasco Sorlí, P.M.; Matarredona, A.M.; Ruiz, O.A.; Menéndez, A.B. (2010) Evaluation of a technical revegetation action performed on foredunes at the Valencian Devesa de la Albufera, Valencia, Spain. *Land Degradation and Development, In press.*

Fattorini, L.; Falasca, G.; Kevers, C.; Mainero-Rocca, L.; Zadra, C.; Altamura, M.M. (2009) Adventitious rooting and xylogenesis are enhanced by methyl jasmonate in tobacco thin cell layers. *Planta, In press*

Joshi, A.; Vaid, N.; Dang, H.Q.; Tuteja, N. (2010) Pea lectin receptor-like kinase promotes high salinity stress tolerance in bacteria and expresses in response to stress in planta. *Glycoconjugate Journal, In press.*

Kevers, C.; Hausman, J.-F.; Faivre-Rampant, O.; Dommes, J., Gaspar T. (2009) What we have learned about the physiology of adventitious rooting of woody plants and how it relates to improvements in the practice *In: Adventitious root formation in forest trees and woody horticultural crops - from genes to applications.* Ed K. Niemi *Research Signpost, Kerala, India, 2009, 209-225. In press*

Monreal, J.A.; McLoughlin, F.; Echevarria, C.; Garcia-Maurino, S.; Testerink, C. (2009) Phosphoenolpyruvate carboxylase (PEPC) from C4 leaves is selectively targeted for inhibition by anionic phospholipids. *Plant Physiology, online Preview DOI:10.1104/pp.109.150326.*

Munnik, T.; Vermeer, J.E.M. (2009) Polyphosphoinositide signaling in plant water stress. *Plant Cell Environment, In press.*

Mu, H.; Jiang, D.; Wollenweber, B.; Dai, T.; Jing, Q.; Cao, W. (2009) Long-term low radiation decreases leaf photosynthesis, photochemical efficiency and grain yield in winter wheat. *Journal of Agronomy and Crop Science, doi:10.1111/j.1439-037X.2009.00394.x In press.*

Novickienė, L.; Gavelienė, V.; Miliuvienė, M.; Kazlauskienė, D.; Pakalniškytė, L. (2009) Lateral root growth analysis in response of auxin physiological analogues in *Arabidopsis*. *Agronomica Hungarica, In press.*

- Ondo Ovono, P.; Kevers, C.; Dommes, J.** (2009) Tuber formation and development of *Dioscorea cayenensis-D. rotundata* complex *in vitro*. Effect of polyamines. *In vitro Cell Biol.-Plant. In press* <http://dx.doi.org/10.1007/s11627-009-9256-0>
- Ondo Ovono, P.; Kevers, C.; Dommes, J.** (2009) Tuber formation and growth of *Dioscorea cayenensis-D. rotundata* complex. Interactions of exogenous and endogenous jasmonic acid and polyamines. *Plant Growth Regulation, In press* (DOI: 10.1007/s10725-009-9441-5)
- Ondo Ovono, P.; Kevers, C.; Dommes, J.** (2009) Effects of storage conditions on sprouting of microtubers of yam (*Dioscorea cayenensis-D rotundata* complex). *Comptes Rendus, In press*
- Pandey, G.K.; Yadav, A.; Kanwar, P.; Tuteja, N.** (2010) Role of Calcium in Regulating Potassium-Sodium Homeostasis and Nutrition Signaling under Stress condition. *Plant Stress, In press.*
- Saglam, A.; Terzi, R.; Nar, H.; Saruhan, N.; Ayaz, F.A.; Kadioglu, A.** (2010): Inorganic and organic solutes in apoplastic and symplastic spaces contribute to osmotic adjustment during leaf rolling. *Acta Biol Cracov Ser Bot., In press.*
- Sanchez, D.H.; Szymanski, J.; Erban, A.; Udvardi, M.K.; Kopka, J.** (2009) Mining for robust transcriptional and metabolic responses to long-term salt stress: a case study on the model legume *Lotus japonicus*. *Plant Cell and Environment*, (DOI: 10.1111/j.1365-3040.2009.02047.x).
- Saruhan, N.; Terzi, R.; Saglam, A.; Kadioglu, A.** (2010): Scavenging of reactive oxygen species in apoplastic and symplastic areas of rolled leaves in *Ctenanthe setosa* under drought stress, *Acta Biologica Hungarica, 60 (3): In press.*
- Shellie, R.A.; Poynter, S.D.H.; Li, J.; Gathercole, J.L.; Whittock, S.P.; Koutoulis, A.** (2009) Varietal characterisation of hop (*Humulus lupulus* L.) by gas chromatography – mass spectrometry analysis of hop cone extracts. *Journal of Separation Science, In press.*
- Singh, S.; Khan, N.A.; Tuteja, N.** (2010) Amelioration of Cadmium Stress in Crop Plants by Nutrients Management: Morphological, Physiological and Biochemical Aspects. *Plant Stress, In press.*
- Szabados L.; Saviouré A.** (2010). Proline : a multifuntional amino acid. *Trends in Plant Science, In press.*
- Tabart, J.; Kevers, C.; Pincemail, J.; Defraigne J-O.; Dommes J.** (2009) Evaluation of spectrophotometric methods for antioxidant compound measurement in relation to total antioxidant capacity in beverages. *Food Chemistry, In press.*
- Terzi, R.; Saglam A.; Kutlu, N.; Nar, H.; Kadioglu, A.** (2010): Impact of Soil Drought Stress on Photochemical Efficiency of Photosystem II and Antioxidant Enzyme Activities of *Phaseolus vulgaris* Cultivars, *Turk. J. Botany, 34: In press.*
- Tuteja, N.; Umate, P.; van Bel, A.J.E.** (2010) Forisomes: calcium-powered protein complexes with potential as 'smart' biomaterials. *Trends in Biotechnology, DOI: 10.1016/j.tibtech.2009.11.005 In press.*

Tuteja, N.; Umate, P.; Tuteja, R. (2010) Forisomes as calcium-energized protein complex: a historical perspective. *Plant Signaling & Behavior, In press.*

Tuteja, N.; Singh, S.; Trivedi, P.K.; Asif, M.H. and Nath, P. (2010) Plant Growth Regulators and their Role in Stress Tolerance. *Plant Stress, In press.*

Submitted papers

Boikoglou, E., Nagy, F., and Davis, S. J. Environmental memory directed by the plant circadian clock (submitted)

Dang, H.; Tran, N.; Tuteja, R.; Tuteja, N. (2009) MCM6 from pea promotes salinity stress tolerance without yield penalty in planta (submitted)

Domagalska, M.A.; Nagy, F.; Davis, S.J. (2010) Genetic analyses between gibberellin, abscisic acid, and brassinosteroids in the control of flowering time in *Arabidopsis thaliana*. (PLOS ONE, in preparation)

Fotopoulos, V.; Dovas, C.I.; Katis, N. Incidence of spinach viruses in Greece (submitted).

Kolmos, E., Nowak, M., Werner, m., Fischer, K., Schwarz, G., Mathews, S., Schoof, H., Nagy, F., Bujnicki, J. M., and Davis, S. J. Integrating ELF4 into the circadian system through combined structural and functional studies. *HFSP. J.* 3: 350-366, (Selected for "notation" by the American Institute of Physics)

Mhadhbi, H.; Fotopoulos, V.; Mylona, P.; Aouani, M.E.; Polidoros, A.N. The antioxidant response of three Tunisian cultivars of *Medicago truncatula* to salinity stress (submitted).

R. Alcázar, Altabella T, Marco F, Bortolotti C, Reymond M, Koncz C, Carrasco P, A.F. Tiburcio. Regulatory function of polyamines in plant abiotic stress responses. *Planta* (under revision).

Tran, N.; Dang, H.; Tuteja, R.; Tuteja, N. (2009) A single subunit MCM6 from pea functions as DNA helicase (submitted)