

George Komis, Ph.D.

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Vzdělání: (Education)

- 1993-1998 BSc. Department of Biology, Faculty of Sciences, National and Kapodistrian University of Athens, Greece
- 1999-2006 PhD. Department of Biology, Faculty of Sciences, National and Kapodistrian University of Athens, Greece

Zaměstnání: (Employment)

- 2006-2007 Hellenic Ministry of Education and Religious Affairs and EU funded post-doctoral fellowship Pythagoras I, Department of Biology, Faculty of Sciences, National and Kapodistrian University of Athens, Greece
- 2010-2011 Hellenic Ministry of Education and Religious Affairs and EU funded post-doctoral fellowship Pythagoras II, Department of Biology, Faculty of Sciences, National and Kapodistrian University of Athens, Greece
- 2012-today junior scientist, Centre of the Region Haná for Biotechnological and Agricultural Research, Department of Cell Biology, Faculty of Science, Palacký University Olomouc

Praxe v zahraničí: (International experiences - stays)

- 1-3/1999, 4/2000 Leibniz Institute for Age Research-Fritz Lipmann Institute, Jena, Germany, Training and Mobility of Researchers/ Large Scale Facilities (EU, FP4) (4 months)
- 6, 10/2004, 7/2005 Biozentrum Klein Flottbek, Universität Hamburg, Bilateral Greek-German project funded by IKY (Greece) and DAAD (Germany) (3 months)
- 2007-2009 Institute for Cellular and Molecular Botany, University of Bonn, Germany, Alexander von Humboldt post doctoral fellowship (2 years)
- 5/2013 Core Facility Cell Imaging and Ultrastructure Research, University of Vienna, Vienna, Austria, Project Interhana (1 month)

Granty a projekty: (Grants and Projects)

Participating in the following:

- CZ.1.07/2.3.00/20.0165 (Project Interhana)
- National Program for Sustainability I (grant no. LO1204)
- GACR project P501/11/1764
- Other projects are listed above

Vědecké zaměření: (Research interests)

Mitogen activated protein kinase-mediated cell signalling and integration with cytoskeletal dynamics and organization under conditions of abiotic stress. Identification of cytoskeletal substrates for reversible protein phosphorylation. Integration of signalling mechanisms to

pathways regulating mitotic spindle assembly, cell division plane determination and cytokinetic progression. Mesoscopy, microscopy, nanoscopy and related image analysis.

Publikační činnost: (Publication records)

20 záznamů na Web of Science, 1 monografie, 3 knižních kapitol, 593 citací (Web of Science, bez autocitací), h-index=10

Publikaci:

20. Berson T, von Wangenheim D, Takáč T, Šamajova O, Rosero A, Ovečka M, **Komis G**, Stelzer E, Šamaj J. (2014). Trans-Golgi network localized small GTPase RabA1d is involved in cell plate formation and oscillatory root hair growth. *BMC Plant Biol*, 14:252 doi:10.1186/s12870-014-0252-0
19. Takáč T, Šamajová O, Pechan T, Košútová P, Husičková A, Vadovič P, **Komis G**, Šamaj J. (2014). Proteomic, biochemical and histochemical analyses reveal increased FeSOD abundance and activity, leading to oxidative stress resistance of Arabidopsis *anp2anp3* double MAPKKK mutant. *J Proteome Res*, 13: 5347-5361
18. Lang I, Sassmann S, Schmidt B, **Komis G**. Plasmolysis: Loss of turgor and beyond. *Plants*, 3: 583-593
17. Smékalová V*, Luptovčiak I*, **Komis G***, Šamajová O, Ovečka M, Doskočilová A, Takáč T, Vadovič P, Novák O, Pechan T, Ziemann A, Košútová P, Šamaj J. (2014). Involvement of YODA and MPK6 in Arabidopsis post-embryogenic root development by auxin upregulation and cell division plane orientation. *ισότιμη συνεισφορά. *New Phytologist*, 203(4):1175-93
16. **Komis G**, Mistrík M, Šamajová O, Doskočilová A, Ovečka M, Illés P, Bártek J, Šamaj J. (2014). Dynamics and organization of cortical microtubules as revealed by superresolution structured illumination microscopy. *Plant Physiology*, 165:129
15. Ovečka M, Takáč T, **Komis G**, Vadovič P, Bekešová S, Doskočilová A, Smékalová V, Luptovčiak I, Šamajová O, Schweighofer A, Meskiene I, Jonak C, Křenek P, Lichtscheidl I, Škultéty L, Hirt H, Šamaj J. (2014). Salt-induced subcellular kinase relocation and seeding susceptibility caused by overexpression of *Medicago* SIMKK in *Arabidopsis*. *Journal of Experimental Botany*, 65:2335
14. Smékalová V, Doskočilová A, **Komis G**, Šamaj J. (2013). Cross talk between MAPK modules, secondary messengers and hormones during abiotic stress signalling in plants. *Biotechnology Advances*, 32:211

13. Šamajová O*, **Komis G***, Šamaj J. (2013). Emerging topics in plant MAPK cell biology. *Trends in Plant Science* 18:140. (Invited Review)
12. **Komis G**, Illés P, Beck M, Šamaj J. (2011). Microtubules and mitogen-activated protein kinase signalling. *Current Opinion in Plant Biology* 14:650 (Invited Review)
11. Beck M*, **Komis G***, Ziemann A, Menzel D, Šamaj J. (2011). Mitogen-activated protein kinase 4 is involved in the regulation of mitotic and cytokinetic microtubule transitions in *Arabidopsis thaliana*. *New Phytologist* 189:1069.
10. Beck M*, **Komis G***, Müller J, Mettbach U, Menzel D, Šamaj J. (2010). *Arabidopsis* homologs of nucleus- and phragmoplast-localized kinase 2 and 3 and mitogen-activated protein kinase 4 are essential for microtubule organization. *Plant Cell* 22:755
09. Panteris E, **Komis G**, Adamakis I-DS, Šamaj J, Bosabalidis AM. MAP65 in tubulin/colchicine paracrystals of *Vigna sinensis* root cells: possible role in the assembly and stabilization of atypical tubulin polymers. (2010). *Cytoskeleton* 67: 152
08. Müller J, Beck M, Mettbach U, **Komis G**, Hause G, Menzel D, Šamaj J. *Arabidopsis* MPK6 is involved in cell division plane control during early root development, and localizes to the pre-prophase band, phragmoplast, trans-Golgi network and plasma membrane. (2010). *Plant Journal* 61(2):234
07. **Komis G**, Quader H, Galanopoulou D, Apostolakos P, Galatis B. (2008). Phospholipase C signaling involvement in microtubule assembly and activation of the mechanism regulating protoplast volume in plasmolyzed root cells of *Triticum turgidum*. *New Phytologist* 178: 267
06. **Komis G**, Quader H, Apostolakos P, Galatis B. (2006). Microtubule-dependent protoplast volume regulation in plasmolysed root-tip cells of *Triticum turgidum*: involvement of phospholipase D. *New Phytologist* 171: 737
05. **Komis G**, Apostolakos P, Gaitanaki C, Galatis B. (2004). Hyperosmotically induced accumulation of a phosphorylated p38-like MAPK involved in protoplast volume regulation of plasmolyzed wheat root cells. *FEBS Letters* 573(1-3):168
04. **Komis G**, Apostolakos P, Galatis B. (2003). Actomyosin is involved in the plasmolytic cycle: gliding movement of the deplasmolyzing protoplast. *Protoplasma* 221:245
03. **Komis G**, Apostolakos P, Galatis B. (2002). Hyperosmotic stress induces formation of tubulin microtubules in root-tip cells of *Triticum turgidum*: their probable involvement in protoplast volume control. *Plant & Cell Physiology* 43:911
02. **Komis G**, Apostolakos P, Galatis B. (2002). Hyperosmotic stress-induced actin filament reorganization in leaf cells of *Chlorophyton comosum*. *Journal of Experimental Botany* 53:1699

01. Komis G, Apostolakos P, Galatis B. (2001). Altered patterns of tubulin polymerization in dividing leaf cells of *Chlorophyton comosum* after a hyperosmotic treatment. *New Phytologist* 149: 193

* Equal first co-authorships

Other activities

Scientific

Ad hoc reviewer for the following peer reviewed journals: Protoplasma, Pesticide Physiology & Biochemistry, Plant Signaling and Behavior, Plant Biology, Physiologia Plantarum, Molecular Plant, PLoS One, Annals of Botany, Marine Ecology Progress Series, Biochimica et Biophysica Acta: Biomembranes, Plant Cell Reports, International Journal of Molecular Sciences, Plant & Cell Physiology, Journal of Natural Products, Annual Review & Research in Biology, Planta.

Teaching

Supervisor for Bachelor Student Jana Vinohradska (finishing at 12/2014)

Supervisor for Master's Student Pavlina Flokova (commenced at 10/2014)

Participant in following topics