Alexios A. Alexopoulos Professor of Field Crops Department of Agriculture University of the Peloponnese Email: <u>a.aleksopoulos@uop.gr</u> Tel: 0030 27210 45148, 0030 27210 45162 Fax: 0030 27210 45234

# Education

1996. Degree in Agricultural Science, Agricultural University of Athens, Faculty of Crop Science.

2001. MSc in Horticulture, Agricultural University of Athens, Faculty of Crop Science.

2006. PhD, Agricultural University of Athens, Faculty of Crop Science.

PhD Thesis: 'Investigation of the mode of action of plant growth regulators on the physiological ageing of potato tubers derived from botanical seed (TPS)'.

### **Postdoctoral Research**

2008-2009. Postdoctoral Research Fellow, Agricultural University of Athens, Faculty of Crop Science. 'The effect of postharvest treatment with chemical substances on the duration of dormancy and the quality of potato tubers (*Solanum tuberosum* L.)'.

# **Honors - Awards**

- Scholarship from the State Scholarship Foundation of Greece as a postgraduate student.
- Scholarship from the State Scholarship Foundation of Greece as a Ph.D. student.
- Scholarship from the State Scholarship Foundation of Greece as a postdoctoral researcher.

#### Foreign Languages – Computer Skills

- English
- Microsoft Office (Word, Excel, PowerPoint, Internet), statistical programs (Microcal Origin, CoStat, StatGraphics, JMP), photo editing programs (Paint Shop Pro, Adobe PhotoShop, Image-Pro Plus).

### **Professional Experience**

- Agronomist (Ministry of Rural Development and Foods, Prefecture of Messinia.
- Agronomist (self employed).

### **Teaching Experience**

 Lecturer (Scientific Contributor), Technological Educational Institute of Kalamata, School of Agricultural Technology (Sept. 2001 – June 2010).

- Assistant Professor of Field Crops, Technological Educational Institute of Peloponnese, Department of Agricultural Technology (June 2010 – April 2016).
- Associate Professor of Field Crops, Technological Educational Institute of Peloponnese, Department of Agricultural Technology (May 2016 – May 2019).
- Associate Professor of Field Crops, University of the Peloponnese, Department of Agriculture (May 2019 October 2023).
- Professor of Field Crops, University of the Peloponnese, Department of Agriculture (October 2023 today).

### **Research Interests**

- Applied physiology and cultivation technique in field crops
- Physiology and production technology of plant propagating material (potatoes, field crops, medicinalaromatic plants)
- Alternative crops: endemic plants, native plants of Greece and tropical plants with medicinal properties
- Post-harvest physiology and technology
- Production of plant propagating material and cultivation of plants in aeroponics and hydroponic floating system

### **Scientific Projects**

- 1. 'Intensive Production of Potato Seed Tuber'. The project was funded by the Cyprus Foundation of Research Propulsion.
- 2. 'Investigation of the ecosystem of the threatened with disappearance, due to human actions, spontaneous plant of sandy coastlines *Pancratium maritimum* (Amaryllidaceae), and the development of a protocol for the preservation of genetic material with tissue culture and conventional methods' (Research project 'Archimedes II'). The project was co- funded by the EU European Social Fund and National Resources EPEAEK II.
- 'Intelligent system for the management of greenhouse cultivations with the use of internet' (Research project 'Pythagoras II'). The project was co- funded by the EU – European Social Fund and National Resources – EPEAEK II.
- 4. 'Integrated management of vegetation at archaeological sites to protect monuments and enhance the historical landscape' (Research project 'Thalis'). The project is co- funded by the EU – European Social Fund and National Resources.
- 5. 'The effect of biological fertilization on the cultivation of potato and the qualitative and technological characteristics of potato tubers before and after frying- identification of biotechnological markers-acrylamide study' (Research project 'Archimedes III'). The project is co-funded by the EU European Social Fund and National Resources.

- 6. 'Investigation of the effect of new technology fertilizers and fertilization techniques on growth, yield and quality of potatoes grown during winter-spring in the Region of Messinia'. Cooperation-finance: Compo Hellas S.A.
- 7. 'Study of the effect of the pesticide Cabrio Duo 4/7.2 EC on the production of potatoes grown during winter-spring in the Region of Messinia'. Cooperation-finance: BASF Hellas S.A.
- Study of the application of fertilizers based on potassium chloride of ICL FERTILIZERS, in the development, production and quality of potato tubers in spring cultivation'. Cooperation-finance: ICL FERTILIZERS.
- 9. 'Lupinus mutabilis for increased biomass from marginal lands and value for biorefineries'. Finance: EU.
- 10. 'Lupinus mutabilis in marginal lands'. Finance: EU.
- 'The use of biostimulants as a tool for sustainable crop management to increase the yield and quality of crops under Mediterranean climatic conditions (BioCROP)'. Finance: E.U. ERDF and National resources.

## **Selected Publications**

#### Chapter in books/books

- Olympios C., Akoumianakis K., Alexopoulos A., Gregoriou S. (2009). Potato tuber dormancy. In: *Intensive Potato Seed Production*, Gregoriou S. (Ed.). J.G. Cassoulides and Son Ltd (in Greek). p. 73-107. (ISBN 978-9963-1-6008-2).
- Passam H.C., Alexopoulos A.A. (2011). Physiology of dormancy. In: *The Science of Horticulture Vol. 2*, K.V. Peter (Ed.). New India Publishing Agency, New Delhi (India). p. 89-117. (ISBN: 9789380235486).
- Passam H.C., Karapanos I.C., Alexopoulos A.A. (2011). The biological basis of fruit quality. In: Breading for Fruit Quality, M.A. Jenks, P.J. Bebeli (Eds). John Wiley & Sons, Inc. p. 5-38. (Print ISBN: 9780813810720, Online ISBN: 9780470959350).
- Passam C.H., Tsantili E., Christopoulos M., Kafkaletou M., Alexopoulos A., Karapanos I. (2015). *Postharvest handling of fruits and vegetables*. Hellenic Academic Electronic Books and Aids, Athens (in Greek). pp. 297. (ISBN: 9789606032615).
- Alexios Alexopoulos and Spyridon A. Petropoulos (2021). Tissue Culture of Potato for Seed Production. In: The Potato - Crop Management, Production, And Food Security (Pedro Manuel Villa, ed.). NOVA Sciences Publishers, Inc. p. 61-89. (ISBN: 978-1-68507-096-0).
- Alexios Alexopoulos and Spyridon A. Petropoulos (2021). Post-Harvest Physiology of Potato Tubers. In: The Potato - Crop Management, Production, And Food Security (Pedro Manuel Villa, ed.). NOVA Sciences Publishers, Inc. p. 253-303. (ISBN: 978-1-68507-096-0).
- Añibarro-Ortega M., Pinela J., Alexopoulos A., Petropoulos S.A., Ferreira I.C.F.R., Barros L. (2022). The powerful Solanaceae: Food and nutraceutical applications in a sustainable world. In: Advances in Food and Nutrition Research (Book Series) 100. Elsevier Inc. p. 131-172. https://doi.org/10.1016/bs.afnr.2022.03.004. (ISBN: 9780323990820).

 Giannoulis K., Petropoulos S.A., Alexopoulos A. (2023). Trends in sustainable use and management of medicinal and aromatic plants utilization and development. In: Ethnopharmacology of Medicinal and Aromatic Plants: Steps Towards Drug Discovery - 1st ed. (Adnan M., Patel M., Snoussi M., eds). CRC Press. p. 41-58. https://doi.org/10.1201/b22842. (ISBN: 9781003284215).

## International Journals

- 1. Alexopoulos A.A., Akoumianakis K.A. and Passam H.C. (2003). The storage of globe artichokes under modified atmospheres. *Journal of Food, Agriculture & Environment JFAE* 1(2): 130-133.
- Alexopoulos A.A., Akoumianakis K.A. and Passam H.C. (2006). The effect of the time and mode of application of gibberellic acid on the growth and yield of potato plants derived from true potato seed. *Journal of the Science of Food and Agriculture* 86: 2189-2195.
- Alexopoulos A.A., Akoumianakis K.A. and Passam H.C. (2006). Effect of plant growth regulators on the tuberisation and physiological age of potato (*Solanum tuberosum* L.) tubers grown from true potato seed. *Canadian Journal of Plant Science* 86: 1217-1225.
- 4. Alexopoulos A.A., Kondylis A. and Passam H.C. (2007). Fruit yield and quality of watermelon in relation to grafting. *Journal of Food, Agriculture & Environment JFAE* 5(1): 178-179.
- Alexopoulos A.A., Akoumianakis K.A., Olympios C.M. and Passam H.C. (2007). The effect of the time and mode of application of gibberellic acid and inhibitors of gibberellin biosynthesis on the dormancy of potato tubers grown from true potato seed. *Journal of the Science of Food and Agriculture* 87: 1973-1979.
- Alexopoulos A.A., Aivalakis G., Akoumianakis K.A. and Passam H.C. (2007). The effect of foliar applications of gibberellic acid and daminozide on plant growth, tuberisation and carbohydrate accumulation within tubers grown from true potato seed (TPS). *The Journal of Horticultural Science* & *Biotechnology* 82: 535-540.
- Alexopoulos A.A., Akoumianakis K.A., Vemmos S.N. and Passam H.C. (2007). The effect of postharvest application of gibberellic acid and benzyl adenine on the duration of dormancy of potatoes produced by plants grown from TPS. *Postharvest Biology and Technology* 46:54-62.
- Alexopoulos A.A., Aivalakis G., Akoumianakis K.A. and Passam H.C. (2008). Effect of gibberellic acid on the duration of dormancy of potato tubers produced by plants derived from true potato seed. *Postharvest Biology and Technology* 49: 424-430.
- Akoumianakis K.A., Aivalakis G., Alexopoulos A.A., Karapanos I.C., Skarmoutsos K. and Passam H.C. (2008). Bromoethane induced changes in respiration rate, ethylene synthesis and enzyme activity of potato tubers in relation to dormancy breakage. *The Journal of Horticultural Science & Biotechnology* 83: 441-446.
- 10. Nikopoulos D. and **Alexopoulos A.A.** (2008). *In vitro* propagation of an endangered medicinal plant: *Pancratium maritimum* L. *Journal of Food, Agriculture & Environment JFAE* 6(2): 393-298.
- Nikopoulos D., Nikopoulou D. and Alexopoulos A.A. (2008). Methods for the preservation of genetic material of *Pancratium maritimum* (Amaryllidaceae). *Journal of Food, Agriculture & Environment JFAE* 6(3&4): 538-546.

- Benkeblia N., Alexopoulos A.A. and Passam H.C. (2008). Physiological and biochemical regulation of dormancy and sprouting in potato tubers (*Solanum tuberosum* L.). Fruit, Vegetable and Cereal Science and Biotechnology vol. 2 Special Issue 1 2008 (2008: International Year of the Potato): 55-68.
- Alexopoulos A.A., Aivalakis G., Akoumianakis K.A. and Passam H.C. (2009). Bromoethane induces dormancy breakage and metabolic changes in tubers derived from true potato seed. *Postharvest Biology and Technology* 54: 165-171.
- Akoumianakis K.A., Karapanos I.C., Giakoumaki M., Alexopoulos A.A. and Passam H.C. (2011). Nitrogen, season and cultivar affect radish growth, yield, sponginess and hollowness. *International Journal of Plant Production* 5: 111-120.
- 15. Karapanos I.C., Alexopoulos A.A., Akoumianakis K.A., Grigoriou F., Miliordos D., Rigakis K., Skandalou I. and Passam H.C. (2013). Application of β-nophthoxyacetic acid (β-NOA) improves fruit yield and marketable quality in out-of-season cherry tomatoes (*Solanum lycopersicum* L. var. *cerasiforme* (Dunal) D.M. Spooner, G.J. Anderson and R.K. Jansen) cultivates in unheated greenhouses in the Mediterranean Basin. *The Journal of Horticultural Science & Biotechnology* 88: 165-172.
- 16. Thanopoulos C., Petropoulos S.A., Alexopoulos A.A., Karapanos I.C., Khah E.M., Akoumianakis K.A. and Passam H.C. (2013). A Comparison of the effectiveness of chlormequat chloride (CCC) application and terminal apex excision to restrict plant height in okra (*Abelmoschus esculentus* [L.] Moench.) and optimize yield. *Journal of Agricultural Science* 5(9): 44-50.
- Kouvelas A.V., Aggelis G., Alexopoulos A.A. and Angelopoulos K.C. (2014). Nitrogen dynamics during growth of sweet sorghum [Sorghum bicolor (L.) Moench] in response to conventiuonal and organic soil fertility management. Australian Journal of Crop Science 8(5): 730-737.
- Akoumianakis K.A., Alexopoulos A.A., Karapanos I.C., Kalatzopoulos K., Aivalakis G. and Passam H.C. (2016). Carbohydrate metabolism and tissue differentiation during potato tuber initiation, growth and dormancy induction. *Australian Journal of Crop Science* 10(2): 185-192.
- Alexopoulos A.A., Karapanos I.C., Akoumianakis K.A. and Passam H.C. (2017). Effect of gibberellic acid on the growth rate and physiological age of tubers cultivated from true potato seed. *Journal of Plant Growth Regulation* 36(1): 1-10.
- Karanisa Th., Alexopoulos A.A., Tsaniklidis G., Karapanos I.C., Akoumianakis K.A. (2016). Carbon disulphide (CS<sub>2</sub>) promotes sprouting and affects the metabolism of harvested mini-tubers grown from true potato seed. *Potato Research* 59(4): 345-356.
- Bebeli P.J., Lazaridi E., Chatzigeorgiou T., Suso M.-J., Hein W., Alexopoulos A.A., Canha G., van Haren R.J.F., Jóhannsson M.H., Mateos C., Neves-Martins J., Prins U., Setas F., Simioniuc D.P., Talhinhas P. and van den Berg M. (2020). State and Progress of Andean Lupin Cultivation in Europe: A Review. *Agronomy* 10, 1038. https://doi:10.3390/agronomy10071038.
- Sampaio S.L., Petropoulos S.A., Alexopoulos A., Heleno S.A., Santos-Buelga C., Barros L. and Ferreira I.C.F.R. (2020). Potato peels as sources of functional compounds for the food industry: A review. *Trends in Food Science and Technology* 103: 118-129.

- Sampaio S.L., Lonchamp J., Dias M.I., Liddle C., Petropoulos S.A., Glamoclija J., Alexopoulos A., Santos-Buelga C., Ferreira I.C.F.R. and Barros L. (2021). Anthocyanin-rich extracts from purple and red potatoes as natural colourants: Bioactive properties, application in a soft drink formulation and sensory analysis. *Food Chemistry* 342, 128526. https://doi.org/10.1016/j.foodchem.2020.128526.
- Sampaio S.L., Barreira J.C.M., Fernandes A., Petropoulos S.A., Alexopoulos A., Santos-Buelga C., Ferreira I.C.F.R., Barros L. (2021). Potato biodiversity: A linear discriminant analysis on the nutritional and physicochemical composition of fifty genotypes. *Food Chemistry* 345, 128853. https://doi.org/10.1016/j.foodchem.2020.128853.
- Shirley L. Sampaio, Spyridon A. Petropoulos, Maria Inês Dias, Carla Pereira, Ricardo C. Calhelha, Ângela Fernandes, Camila M.M. Leme, Alexios Alexopoulos, Celestino Santos-Buelga, Isabel C.F.R. Ferreira, Lillian Barros (2021). Phenolic composition and cell-based biological activities of ten coloured potato peels (*Solanum tuberosum* L.). *Food Chemistry* 363, 130360. https://doi.org/10.1016/j.foodchem.2021.130360.
- Alexopoulos A.A., Marandos E., Assimakopoulou A., Vidalis N., Petropoulos S.A., Karapanos I.C. (2021). Effect of Nutrient Solution pH on the Growth, Yield and Quality of *Taraxacum officinale* and *Reichardia picroides* in a Floating Hydroponic System. *Agronomy* 11(6):1118. https://doi.org/10.3390/agronomy11061118
- Alexopoulos A.A., Assimakopoulou A., Panagopoulos P., Bakea M., Vidalis N., Karapanos I.C., Petropoulos S.A. (2021) Impact of Salinity on the Growth and Chemical Composition of Two Underutilized Wild Edible Greens: *Taraxacum officinale* and *Reichardia picroides*. *Horticulturae* 7(7): 160. <u>https://doi.org/10.3390/horticulturae7070160</u>
- Alexopoulos A.A., Mavrommati E., Kartsonas E., Petropoulos S.A. (2022). Effect of Temperature and Sucrose on In Vitro Seed Germination and Bulblet Production of *Pancratium maritimum* L. *Agronomy* 12(11): 2786. <u>https://doi.org/10.3390/agronomy12112786</u>
- Alexopoulos A.A., Assimakopoulou A., Panagopoulos P., Bakea M., Vidalis N., Karapanos I.C., Rouphael Y., Petropoulos S.A. (2021) *Hedypnois cretica* L. and *Urospermum picroides* L. Plant Growth, Nutrient Status and Quality Characteristics under Salinity Stress. *Horticulturae* 9(1): 65. https://doi.org/10.3390/horticulturae9010065
- Paschoalinotto B.H, Polyzos N., Compocholi M., Rouphael Y., Alexopoulos A., Dias M.I., Barros L., Petropoulos S.A. (2023). Domestication of Wild Edible Species: The Response of *Scolymus hispanicus* Plants to Different Fertigation Regimes. *Horticulturae* 9(1): 103. https://doi.org/10.3390/horticulturae9010103
- Alexopoulos A.A., Kartsonas E., Karras S., Mavrommati E., Petropoulos S.A., Papafotiou M. (2023). *In vitro* propagation of *Origanum scabrum* (Boiss. & Heldr.): an endemic medicinal plant of Greece. *Plants* 12: 2118. <u>https://doi.org/10.3390/plants12112118</u>
- Chaski Ch., Giannoulis K.D., Alexopoulos A.A., Petropoulos S.A. (2023). Biostimulant application alleviates the negative effects of deficit irrigation and improves growth performance, essential oil yield and water-use efficiency of mint crop. *Agronomy* 13: 2182. https://doi.org/10.3390/agronomy13082182

33. Vidalis N., Kourkouvela M., Argyris D.-C., Liakopoulos G., Alexopoulos A., Petropoulos S.A., Karapanos I. (2023). The impact of salinity on growth, physio-biochemical characteristics, and quality of *Urospermum picroides* and *Reichardia picroides* plants in varied cultivation regimes. *Agriculture* 13: 1852. https://doi.org/10.3390/agriculture13091852

# International Conferences

- Kyriakopoulou O.G., Karapanos I. C., Tsikritsakis G., Tsermoulas S., Alexopoulos A.A. and Passam H.C. (2012). Effect of shading on the development and yield of two okra (*Hibiscus esculentus* L.) cultivars grown under high temperatures. ISHS *Acta Horticulturae* 936: 155-159.
- Karapanos I.C., Chandra M., Akoumianakis K.A., Passam H.C. and Alexopoulos A.A. (2015). The ripening and quality characteristics of cherry tomato fruits in relation to the time of harvest. *ISHS Acta Horticulturae* 1079: 495-500.
- Alexopoulos A.A., Karapanos I.C., Akoumianakis K.A. and Passam H.C. (2015). Effect of postharvest application of plant growth regulators on the storage life of tubers grown from true potato seed (TPS). *ISHS Acta Horticulturae* 1079: 627-631.
- Salonikioti A., Petropoulos S., Antoniadis V., Levizou E., Alexopoulos A. (2015). Wild edible species with phytoremediation properties. Agriculture and Climate Change - Adapting Crops to Increased Uncertainty (AGRI 2015), Amsterdam, The Netherlands, 15-17 February 2015. Procedia Environmental Sciences 29: 98-99.
- Karanisa T., Akoumianakis K., Alexopoulos A., Karapanos I. (2015). Effect of postharvest application of carvone on potato tubers grown from true potato seed (TPS). Agriculture and Climate Change -Adapting Crops to Increased Uncertainty (AGRI 2015), Amsterdam, The Netherlands, 15-17 February 2015. Procedia Environmental Sciences 29: 166-167.
- 6. Alexopoulos A.A., Karapanos I., Akoumianakis K., Passam H. (2017). Study of the growth pattern of potato minitubers produced by plants derived from TPS and treated with gibberellic acid and inhibitors of gibberellins biosynthesis. EAPR 20th Triennial Conference, Versailles, France, 9-14 July 2017: 311.
- Alexopoulos A., Varzakas Th., Karras S., Koriki A., Kotsiras A. and Xynias I. (2019). Effect of nitrogen and phosphorus fertilization on growth components, yield and tuber quality characteristics of two potato cultivars grown under organic production system. *ISHS Acta Horticulturae* 1242(1): 191-197.
- Karanisa Th., Alexopoulos A., Akoumianakis K., Karapanos I. and Passam H. (2019). Effect of surface coating with waxes on the dormancy of potato tubers grown from true potato seed (TPS). *ISHS Acta Horticulturae* 1242(2): 711-717.
- Izamara de Oliveira, Jonata M. Ueda, Christian Rodrigues, Sandrina Heleno, Spyridon Petropoulos, Alexios Alexopoulos, Márcio Carocho, Lillian Barros, Isabel C.F.R. Ferreira. Physical properties of 29 colored potato varieties (2021). Natural products application: Health, Cosmetic and Food (on-line edition). Braganca, Portugal, 4-5 February 2021. Book of Abstracts p. 205.

- Shirley L. Sampaio, Julien Lonchamp, Maria Inês Dias, Catriona Liddle, Spyridon A. Petropoulos, Jasmina Glamočlija, Alexios Alexopoulos, Celestino Santos-Buelga, Isabel C.F.R. Ferreira, Lillian Barros (2021). Anthocyanin-rich extracts from purple and red potatoes as natural colourants: bioactive properties, application in a soft drink formulation and sensory analysis. Natural products application: Health, Cosmetic and Food (on-line edition). Braganca, Portugal, 4-5 February 2021. Book of Abstracts p. 239.
- Izamara de Oliveira, Christian Rodrigues, Sandrina Heleno, Spyridon Petropoulos, Alexios Alexopoulos, Márcio Carocho, Isabel C.F.R. Ferreira, Lillian Barros (2021). Nutritional characterization, ph and antioxidant activity of the pulp of 29 color-fleshed potatoes. 7<sup>th</sup> Portuguese Young Chemists Meeting. Bragança, Portugal, 19-21 May 2021. Book of Abstracts.
- 12. Izamara de Oliveira, Christian Rodrigues, Sandrina Heleno, Spyridon Petropoulos, Alexios Alexopoulos, Márcio Carocho, Isabel C.F.R. Ferreira, Lillian Barros (2021). Nutritional and antioxidant characterisation of the peel of 10 species of coloured potatoes. XXI EuroFoodChem Congress, On-line conference, 22-24 November 2021. Book of Abstracts p. 50.
- 13. Nikolaos Polyzos, Maria Kompocholi, Alexios Alexopoulos, Maria Ines Diaz, Beatriz Paschoalinotto, Lillian Barros, Spyridon A. Petropoulos (2022). The effect of fertilization regimes on growth and chemical composition of *Cichorium spinosum* plants. XIII International Scientific Agriculture Symposium "AGROSYM 2022". Jahorina, 6-9 October 2022. Book of Abstracts p. 130.

### Membership in Scientific Societies

- Hellenic Society of Horticultural Science (H.S.H.S.)
- European Association for Potato Research (EAPR)
- Hellenic Scientific Society for Genetics and Plant Breeding (H.S.S.G.P.B.)
- International Society for Horticultural Science (I.S.H.S.)
- Geotechnical Chamber of Greece (G.C.G.)