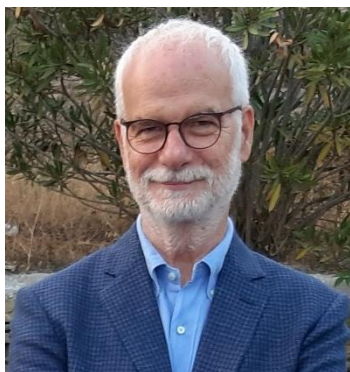




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Personal History :

- Place of Birth: Heraklion, Crete, Greece

Education:

- Bachelor of Science degree in Horticulture-Agronomy (March 1973), Agricultural University of Athens.
- Master of Science degree in Vegetable Crops. (March 1984), University of California, Davis.
- Doctor of Philosophy degree in Horticulture. (August 1987), University of Maryland, College Park.

Teaching Experience:

- Teaching of undergraduate and graduate courses at the Aristotle University of Thessaloniki, University of Crete, University of Athens, and Mediterranean Agronomic Institute of Chania.
- Supervising up-to-today:
- 21 post-docts, 9 Ph.D. students, 16 M.Sc. students and 5 technicians.

Affiliation

- Member of 4 national and international scientific societies.

Participation in Scientific Meetings

- Participation in 90 meetings with 90 presentations and 70 as invited speaker.

Grant History:

- 43 competitive grants from National and EU agencies.

Professional Recognition (recent):

- Associated Editor Frontiers in Plant Science, Section Plant Metabolism and Chemodiversity
- Associated Editor, Frontiers in Sustainable Food Systems, Section Crop Biology and Sustainability
- Associated Editor, Plant Hormones
- Member of the Hellenic Agricultural Academy
- Metrics (October 2026): Publication 101, Citations, 8136, h-index 45, i10-index 80
Google Scholar: <http://scholar.google.gr/citations?user=ZLJoqwIAAAAJ>

Organization of Scientific Meetings and Conferences

- Organizer and Chairman of NATO-ARW και EU-TMR-Euroconference "Biology and Biotechnology of the Plant Hormone Ethylene", Chania 9-13, 1996.
- Organization of the Cost Action annual meeting of COST ACTION of European Union, Chania 15-17, 1996.
- Organizer and Chairman of EU-TMR-Euroconference "Biology and Biotechnology of the Plant Hormone Ethylene", Santorini 5.8 1998.
- Organizer and Moderator of the Workshop W03: "Antioxidants, Bioactive Compounds and Health Promoting Substances" held in the 7th INTERNATIONAL POSTHARVEST SYMPOSIUM 2012, Kuala Lumpur, Malaysia, June 25-29, 2012.
- Organizer and Chairman of the International Symposium TERPNET2013: Kolibari, Crete, Greece June 1-5, 2013.
- Organizer and Moderator of the Workshop «Molecular mechanisms underlying health compounds biosynthesis in fruits» (COST ACTION FA1106) held in the «Joint Meeting of 2nd

International Conference on Plant Biology 21st Symposium of the Serbian Plant Physiology Society, 17-20 June, 2015, Petnica Science Center, Petnica, Serbia.

- Organizer and Chairman of the International Symposium on Plant Hormone Ethylene (ETHYLENE2018), Chania, Crete, Greece, 2018.
- Organizer and Chairman of the "SOLANACEAE2022 XVII International Conference of the Plant Family of Solanaceae, November 1-5, 2022, Thessaloniki

Main research interests

A. Nutritional properties of fruit and vegetables.

- Enhancement of Vit. C and arginine levels in fruit

B. Molecular Biotechnology of Secondary Metabolism

- Isolation, functional and genetic manipulation of genes participating in the biosynthesis of pharmacologically active diterpenes from *Cistus creticus*, *Rosmarinus officinalis* and *Salvia fruticosa*.
- Manipulation of biosynthesis and oxidation of ascorbic acid (vit. C) in plants to enhance nutritional properties of fruit and to increase tolerance to stress.

C. Molecular Biotechnology of Plant Stress

- Understanding the biochemical and molecular mechanisms by which low oxygen suppresses fruit ripening by isolating and characterizing a number of genes participating in low oxygen action on tomato and citrus fruit ripening.
- Arginine biosynthesis in tomato and its manipulation to enhance nutritional properties of tomato fruit and to increase tolerance to drought and salinity.

Main Publications:

1. Stefanos Kostas, Symela Ntoanidou, Christos Bazakos, Eirini Sarrou, Nausica Rafailidou, Antigoni Papanikolaou, Antonios Makris, Aikaterini-Angeliki Kotoula, Efstathios Hatziloukas, Athanasios Economou, Angelos K Kanellis. 2026. Harnessing genetic, chemical, and transcriptomic analyses guided the selection of *Cistus creticus* subsp. *creticus* genotypes rich in labdane-type diterpenes. *Planta* 264, 53 (2026). <https://doi.org/10.1007/s00425-026-05072-1>
2. Theodora Papagrigoriou, Efstathia Patelou, Charikleia Paloukopoulou, Stefanos Kostas, Angelos K Kanellis, Diamanto Lazari. 2026. Phytochemical Evaluation of Wild-Grown Rosehips from Native Greek *Rosa canina* Genotypes. *Nutraceuticals* 2026, 6(2), 34; <https://doi.org/10.3390/nutraceuticals6020034>
3. Symela Ntoanidou, Charikleia Paloukopoulou, Christos Bazakos, Efstathia Patelou, Panagiota-Iro Chintiroglou, Anthi Kanioura, Evangelos Gklavakis, Anastasia Karioti, Stefanos Kostas, Angelos K Kanellis. 2026. Integrated genetic and-omics analyses revealed *Salvia officinalis* genotypes high in carnosic acid content linked to distinct genetic backgrounds. *Industrial Crops & Products* 245 (2026) 123336, <https://doi.org/10.1016/j.indcrop.2026.123336>
4. Leontaridou, Konstantina, Urska Vrhovsek, C. Lotti, Eirini Sarrou, Anastasia Karioti, Anthi Katsiarimpa, Konstantinos Bakasietas and **Angelos K. Kanellis**. 2025. Multi-omics approach combined with functional characterization of genes enlightens the formation of certain aromatic compounds in *Vitis vinifera* var. Assyrtiko grape berries. *bioRxiv*, 2025.07. 25.666847 doi: <https://doi.org/10.1101/2025.07.25.666847>
5. Kutryieva-Nowak, N., A Pantelić, S Isaković, **AK Kanellis**, M Vidović, A. Leszczuk. 2025. Effect of the overexpression of the GGP1 gene on cell wall remodelling and redox state in the tomato fruit. *Plant Science* 355, 112470
6. Mellidou, I., A Granell, H Ezura, P Kalaitzis, N Gonzalez, A Goossens, M.Bouzayen, **A. K. Kanellis**. 2025. XVII SOLANACEAE2022 meets the 2020-decade challenges. *Frontiers in Plant Science* 16, 1570346
7. Papanikolaou A., Papaefthimiou, D., Dragana, D., Karakousi, C.-V., Makris, A.M. and **Kanellis, A.K.** (2024). Chemical and transcriptomic analyses of young leaves trichomes from *Cistus creticus* subsp. *creticus* reveal the biosynthesis of certain labdane-type diterpenoids and their acetylated forms. *Journal of Experimental Botany* 75 (11), 3431-3451.
8. Mellidou, I., and **A.K. Kanellis**. (2024). Revisiting the role of ascorbate oxidase in plant systems. *Journal of Experimental Botany* 75 (9), 2740-2753.

9. Ntoanidou, S., Kaplani, A., Paloukopoulou, C., Bazakos, C., Patelou, E., Doukidou, L., Kotoula, AA, Gklavakis, E., Hatzilazarou, S., Karioti, A., Nianiou-Obeidat, E., Kostas, S., and **Kanellis, A.K.** 2024 Identification of high carnosic acid rosemary (*Salvia rosmarinus* Spenn.) genotypes through genetic diversity exploitation, chemical profiling, and transcriptomic approaches. *Industrial Crops and Products* 214, 118562.
10. Hatzilazarou, S., E Kyriakidou, A Economou, T Panagiotidou, E Pipinis, **AK Kanellis**, S Kostas. 2024. *In vitro* response of calcium alginate-encapsulated shoot explants of *Cistus creticus* after short-term cold preservation EHC2024: International Symposium on Ornamental Horticulture for the Service of Society 141. Doi: [10.17660/ActaHortic.2025.1417.25](https://doi.org/10.17660/ActaHortic.2025.1417.25)
11. Li, H., Song Wu, Ruoxi Lin, Yiren Xiao, Ana Luisa Malaco Morotti, Ya Wang, Meytal Galilee, Haowen Qin, Tao Huang, Yong Zhao, Xun Zhou, Jun Yang, Qing Zhao, **Angelos K Kanellis**, Cathie Martin, Evangelos C Tatsis. 2023. The genomes of medicinal skullcaps reveal the polyphyletic origins of clerodane diterpene biosynthesis in the family Lamiaceae. *Molecular Plant* 16, 1–22, <https://doi.org/10.1016/j.molp.2023.01.006>.
12. Mellidou, I., and **A.K. Kanellis**. 2023. Deep inside the genetic regulation of ascorbic acid during fruit ripening and postharvest storage. *Postharvest Biology and Technology* 204 (2023) 112436, <https://doi.org/10.1016/j.postharvbio.2023.112436>
13. Mellidou I, Koukounaras A, Frusciante S, Rambla JL, Patelou E, Ntoanidou S, Pons C, Kostas S, Nikoloudis K, Granell A, Diretto G. and **Kanellis AK**. 2023. A metabolome and transcriptome survey to tap the dynamics of fruit prolonged shelf-life and improved quality within Greek tomato germplasm. *Front. Plant Sci.* 14:1267340, doi: 10.3389/fpls.2023.1267340
14. Nanos, C, P Tsoulpha, S Kostas, S Hatzilazarou, I Michail, V Anastasiadi, E Pipinis, E Gklavakis, **AK Kanellis**, I Nianiou-Obeidat. 2023. *Horticulturae*, 9, 847.
15. Koukounaras, Athanasios, Ifigeneia Mellidou, Efstathia Patelou, Stefanos Kostas, Vijaya Shukla, Cawas Engineer, Dimitra Papaefthimiou, Foued Amari, Dimitris Chatzopoulos, Autar K. Mattoo, **Angelos K. Kanellis**. 2022. Over-expression of GGP1 and GPP genes enhances ascorbate content and nutritional quality of tomato. *Plant Physiology and Biochemistry*, 193, 124-138. <https://doi.org/10.1016/j.plaphy.2022.10.023>
16. Aničić, N., Patelou, E., Papanikolaou, A., Kanioura, A., Valdesturli, C., Arapitsas, P., Kostas, S., Koukounaras, A., Sarrou, E., Martens, S., and **Kanellis, A.K.** (2021). Comparative metabolite and gene expression analyses in combination with gene characterization revealed the patterns of flavonoid accumulation during *Cistus creticus* subsp. *creticus* fruit development. *Frontiers in Plant Science* 12:619634, doi: [10.3389/fpls.2021.619634](https://doi.org/10.3389/fpls.2021.619634).
17. Lukas, B., Jovanovic, D., Schmiderer, C., Kostas, S., **Kanellis, A.K.**, Gómez Navarro, J., Aytaç, Z., Koç, A., Sözen, E., Novak, J. 2021. Intraspecific genetic diversity of *Cistus creticus* L. and evolutionary relationships to *Cistus albidus* L. (Cistaceae): Meeting of the generations? *Plants*. 2021; 10(8):1619. <https://doi.org/10.3390/plants10081619>
18. Mellidou, I., A. Koukounaras, S. Kostas, E. Patelou, **A.K. Kanellis**. 2021. Regulation of Vitamin C Accumulation for Improved Tomato Fruit Quality and Alleviation of Abiotic Stress. *Genes* 12, 694. <https://doi.org/10.3390/genes12050694>. 62.
19. Chatzopoulou, F., M. Sanmartin, I. Mellidou, I. Pateraki, A. Koukounaras, G. Tanou, M.S. Kalamaki, S. Veljović-Jovanović, T.C. Antić, S. Kostas, P. Tsouvaltzis, R. Grumet and **A.K. Kanellis**. 2020. Silencing of ascorbate oxidase results in reduced growth, altered ascorbic acid levels and ripening pattern in melon fruit. *Plant Physiology and Biochemistry*. Elsevier Masson. <https://doi.org/10.1016/j.plaphy.2020.08.040>
20. Papaefthimiou, D., G. Diretto, O.C. Demurtas, P. Mini, P. Ferrante, G. Giuliano and **A.K. Kanellis**. 2019. Recombinant production of labdane-type diterpenes in the green alga *Chlamydomonas reinhardtii*. *Phytochemistry* <https://doi.org/10.1016/j.phytochem.2019.112082>.
21. Mellidou, I., Georgiadou, E.C., Kaloudas, D., Kalaitzis, P., Fotopoulos, V., **Kanellis, A.K.** 2019. Vitamins. *Postharvest Physiology and Biochemistry of Fruits and Vegetables*, eds. E. M. Yahia, A. Carrillo-Lopez. Woodhead Publishing, <https://doi.org/10.1016/B978-0-12-813278-4.00017-8>.
22. Mellidou, I., A. Koukounaras, F. Chatzopoulou, S. Kostas and **A.K. Kanellis**. 2017. *Plant Vitamin C: one single molecule with a plethora of roles. Fruit and Vegetable Phytochemicals: Chemistry and Human Health*, 2 Volumes. Ed. Elhadi M. Yahia, hn Wiley & Sons, Inc., 111 River Street, Hoboken,

NJ 07030, USA.

23. Mellidou, I. and **A.K. Kanellis**, 2017. Genetic Control of Ascorbic Acid Biosynthesis and Recycling in Horticultural Crops. *Frontiers in Chemistry*, <https://doi.org/10.3389/fchem.2017.00050>.
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25. Ioannidi, E., S. Rigas, D. Tsitsekian, G. Daras, A. Alatzas, A. Makris, G. Tanou, A. Argiriou, D. Alexandrou, S. Poethig, P. Hatzopoulos and **A.K. Kanellis**. 2016. Trichome patterning control involves TTG1 interaction with SPL transcription factors. *Plant Mol. Biol.* DOI 10.1007/s11103-016-0538-8.
26. Božić, D., D. Papaefthimiou, K. Brückner, R.C. de Vos, C.A. Tsoleridis, **A.K. Kanellis**. 2015. Towards elucidating carnosic acid biosynthesis in Lamiaceae: functional characterization of the three first steps of the pathway in *Salvia fruticosa* and *Rosmarinus officinalis*. *PLoS ONE* 10(5): e0124106. doi:10.1371/journal.pone.0124106.
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28. Ignea, C. E. Ioannou, P. Georgantea, S. Loupassaki, F.A. Trikka, **A.K. Kanellis**, A.M. Makris, V. Roussis, and S. C. Kampranis. 2015. Reconstructing the chemical diversity of labdane-type diterpene biosynthesis in yeast. *Metabolic Engineering* 28:91–103.
29. Trikka, F.A., A. Nikolaidis, C. Ignea, A. Tsalaballa, L.-E. Tziveleka, E. Ioannou, V. Roussis, E.A. Stea, D. Božić, A. Argiriou, **A.K. Kanellis**, S.C. Kampranis and A.M. Makris. 2015. Combined metabolome and transcriptome profiling provides new insights into diterpene biosynthesis in *S. pomifera* glandular trichomes *BMC Genomics* 16:935.
30. Kostopoulou, Z, I. Therios, E. Roumeliotis, **A.K. Kanellis**, A. Molassiotis. 2015. Melatonin combined with ascorbic acid provides salt adaptation in *Citrus aurantium* L. seedlings. *Plant Physiology Biochemistry* 86:155-65.
31. Brückner, K., D. Božić, D. Manzano, D. Papaefthimiou, I. Pateraki, U. Scheler, A. Ferrer, R. C. H. de Vos, **A.K. Kanellis** and A. Tissier. 2014. Characterization of two genes for the biosynthesis of abietane-type diterpenes in rosemary (*Rosmarinus officinalis*) glandular trichomes. *Phytochemistry* 101: 52–64. DOI: 10.1016/j.phytochem.2014.01.021.
32. Papaefthimiou, D., A. Papanikolaou, V. Falara, S. Givanoudi, S. Kostas and **A.K. Kanellis**. 2014. Genus *Cistus*: a model for exploring labdane-type diterpenes' biosynthesis and a natural source of high value products with biological, aromatic and pharmacological properties. *Frontiers in Chemistry* 2: 1-19.
33. **Kanellis, A.K.** and G.A. Manganaris. 2014. Antioxidants and Bioactive Compounds in Fruits. In *Fruit Ripening: Physiology, Signaling and Genomics*, eds. by P. Nath, M. Bouzayen, A. K. Mattoo, and J-C. Pech. CAB International Publ. pp. 99-126.
34. Fotopoulos V. and **A.K. Kanellis**, 2013. Altered apoplastic ascorbate redox state in tobacco plants via ascorbate oxidase overexpression results in delayed dark-induced senescence in detached leaves. *Plant Physiology and Biochemistry* 73: 154-160.
35. Ignea, C., F.A. Trikka, I. Kourtzelis, A. Argiriou, **A.K. Kanellis**, S.C. Kampranis, and A.M. Makris, 2012. Positive genetic interactors of HMG2 identify a new set of genetic perturbations for improving sesquiterpene production in *Saccharomyces cerevisiae*. *Microbial Cell Factories* 2012, 11:162.
36. Mellidou, I., J. Keulemans, **A.K. Kanellis**, and M. W. Davey. 2012. Regulation of fruit ascorbic acid concentrations during ripening in high and low vitamin C tomato cultivars. *BMC Plant Biology* 2012, 12:239.
37. Falara, V., E. Pichersky and **A.K. Kanellis**. 2010. A copalol-8-ol diphosphate synthase from the angiosperm *Cistus creticus* subsp. *creticus* is the key enzyme for the formation of pharmacologically active labdane-type diterpenes. *Plant Physiology* 154: 301–310.
38. Kalamaki, M. S., D. Alexandrou, D. Lazari, G. Merkouropoulos, V. Fotopoulos, I. Pateraki, A. Aggelis, A. López Carrillo, M. Rubio Cavetas and **A.K. Kanellis**. 2009. Over-expression of a tomato N-acetyl-

- glutamate synthase gene in *Arabidopsis thaliana* results in increased tolerance in salt and drought stresses. *Journal of Experimental Botany* 60: 1859-1871; doi:10.1093/jxb/erp072.
39. Ioannidi, E., M.S. Kalamaki, I. Pateraki, C. Engineer, D. Alexandrou, J. Giovannonni and A.K. Kanellis. 2009. Expression profiling of ascorbic acid-related genes during tomato fruit development and ripening and in response to various stresses. *Journal of Experimental Botany* 60: 663–678.
 40. Falara V., V. Fotopoulos, T. Margaritis, T. Anastasaki, I. Pateraki, A. Bozabalidis, D. Kafetzopoulos, C. Demetzos, E. Pichersky, and A.K. Kanellis. 2008. Transcriptome analysis approaches for the isolation of trichome - specific genes from the medicinal plant. *Cistus creticus* ssp. *creticus*. *Plant Molecular Biology* 68: 633-51.
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