

Curriculum vitae
Yiola Petropoulou

PERSONAL

Name: Yiola
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Citizenship: Greek
Birth date/place: 21/07/61, Athens, Greece
Position: Assistant Professor
Institution: Laboratory of Plant Physiology, Department of Biology,
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EDUCATION

- Undergraduate student in the Department of Political Science and Public Law, Faculty of Law, National and Kapodistrian University of Athens, Greece (1979-1981).
- B.Sc., Department of Biology, University of Patras, Greece (1986).
- PhD thesis, Department of Biology, University of Patras, Greece (1993).

PROFESSIONAL ACTIVITY

- Research assistant in scientific projects funded by EC and the Greek General Secretariat of Research and Technology, in the Laboratory of Plant Physiology, Department of Biology, University of Patras (1987-1992).
- Technical staff in the same Laboratory, Dept of Biology, University of Patras. Participation as research assistant in scientific projects funded by EC (1992-2000).
- Lecturer, Dept of Biology, University of Patras, Greece (2000-2005)
- Assistant Professor, Dept of Biology, University of Patras, Greece (2005-today).

TEACHING EXPERIENCE

(at the Department of Biology, University of Patras, Greece)

Undergraduate level

- Plant Physiology (2005-today)
- Plant Ecophysiology (2002-today)
- Photosynthesis (2003-today)
- Laboratory training of undergraduate students in Plant Physiology and Ecophysiology (1994-today)

Committees for B.Sc. Theses

Supervisor of 4 theses, member of the examination committee of 18 theses.

Post-graduate level (2002-today)

- Global climatic changes and their effects on plants
- Environmental Biology of Mediterranean plants

Committees for M.Sc. Theses

Supervisor of 1 thesis, member of the examination committee of 3 theses.

Committees for PhD Theses

Supervisor of 2 theses, member of the advisory committee of 4 theses and member of the examination committee of 5 theses.

RESEARCH INTERESTS

Plant Physiology and Ecophysiology, with emphasis on the study of the

- the protective potential of leaves against photoinhibitory environmental conditions
- physiological and biochemical adaptations of the photosynthetic machinery in leaves with high contents of anthocyanins
- particular characteristics of the photosynthetic apparatus in stems and fruits

RESEARCH ACTIVITY

- 28 research articles and one review, published in International Journals listed in the Science Citation Index.
- Participation (with research presentation) in 10 International and 19 Hellenic Scientific Conferences.
- Project leader
 1. *Photoprotective and antioxidative systems in green and red leaves* (2006-2008, funded by the Research Committee of the Patras University, project K. Karatheodori)
 2. *Photosynthetic characteristics of green fruits: correlation with the peculiarity of their internal microenvironment and their photoprotective and metabolic demands* (2010-2013, Greek Ministry of Education and Religious affairs, project “Herakleitos II”).
- Participation as a researcher in the following scientific projects:
 1. *Mechanism of PEPCase activity regulation* (1987-1989, Project leader: Prof. N.A. Gavalas, funded by the Greek General Secretariat of Research and Technology).

2. *Effects of enhanced UV-B radiation on plants* (1992-1995, Project leader: Prof. Y. Manetas, funded by the EC). In collaboration with the following laboratories: Dept of Plant Ecology, Univ. of Lund, Sweden - Dept of Plant Ecology, Univ. of Copenhagen, Denmark - Dept of Animal and Plant Sciences, Univ. of Sheffield, UK - Biology Division, Univ. of Lancaster, UK - Dept of Plant Physiology, Univ. of Lund, Sweden - Abisko Scientific Research Station, Sweden.
3. *Effects of enhanced UV-B radiation on sensitive European Ecosystems* (1996-1999, Project leader: Prof. Y. Manetas, funded by the EC). In collaboration with the following laboratories: Dept of Plant Physiology, Univ. of Lund, Sweden - Dept of Plant Ecology, Univ. of Lund, Sweden - Dept of Animal and Plant Sciences, Univ. of Sheffield, UK - Biology Division, Univ. of Lancaster, UK - Abisko Scientific Research Station, Sweden - Dept of Systems Ecology, Vrije Universiteit of Amsterdam, the Netherlands.
4. *Leaf colour: possible ecophysiological roles of anthocyanins* (2003-2005, Project leader: Prof. Y. Manetas, funded by the Greek Ministry of Education and Religious affairs, project "Herakleitos I").

List of publications

(Not including research presentations in International and Greek Conferences)

PhD Thesis

YIOLA PETROPOULOU, 1993. Intact, isolated mesophyll and guard cell protoplasts as an experimental system for the study of phosphoenolpyruvate carboxylase catalytic and regulatory properties. University of Patras, Greece (supervisor: Prof. Y. Manetas).

Research articles

1. MANETAS, Y., PETROPOULOU, Y. & KARABOURNIOTIS, G., 1986. Compatible solutes and their effects on phosphoenolpyruvate carboxylase of C4-halophytes. *Plant Cell Environment* 9: 145-151.
2. WILLMER, C.M., PETROPOULOU Y. & MANETAS, Y., 1990. No light activation and high malate sensitivity of phosphoenolpyruvate carboxylase in guard cell protoplasts of *Commelina communis* L. *Journal of Experimental Botany* 41: 1103-1107.
3. PETROPOULOU, Y., MANETAS, Y. & GAVALAS, N.A., 1990. Intact mesophyll protoplasts from *Zea mays* L. as a source of phosphoenolpyruvate carboxylase unaffected by extraction: Advantages and limitations. *Physiologia Plantarum* 80: 605-611.

4. GRAMMATIKOPOULOS, G., KARABOURNIOTIS, G., KYPARISSIS, A., PETROPOULOU Y. & MANETAS, Y., 1994. Leaf hairs of olive (*Olea europaea* L.) prevent stomatal closure by ultraviolet-B radiation. *Australian Journal of Plant Physiology* 21:293-301.
5. KYPARISSIS, A., PETROPOULOU, Y. & MANETAS, Y., 1995. Summer survival of leaves in a soft-leaved shrub (*Phlomis fruticosa* L., Labiatae) under Mediterranean field conditions: avoidance of photoinhibitory damage through decreased chlorophyll contents. *Journal of Experimental Botany* 46: 1825-1831.
6. NIKOLOPOULOS, D., PETROPOULOU, Y., KYPARISSIS, A., & MANETAS, Y., 1995. Effects of enhanced UV-B radiation on the drought semi-deciduous Mediterranean shrub *Phlomis fruticosa* under field conditions are season-specific. *Australian Journal of Plant Physiology* 22: 737-745.
7. PETROPOULOU, Y., KYPARISSIS, A., NIKOLOPOULOS, D. & MANETAS, Y., 1995. Perturbations of normal UV-B radiation environment alter leaf growth rates in *Phlomis fruticosa* L. seedlings. *Environmental Experimental Botany* 35: 371-377.
8. PETROPOULOU, Y., KYPARISSIS, A., NIKOLOPOULOS, D., & MANETAS, Y., 1995. Enhanced UV-B radiation alleviates the adverse effects of summer drought in the Mediterranean pines under field conditions. *Physiologia Plantarum* 94: 37-44.
9. BISBA, A., PETROPOULOU, Y. & MANETAS, Y., 1997. The transiently pubescent young leaves of plane (*Platanus orientalis* L.) are deficient in photodissipative capacity. *Physiologia Plantarum* 101: 373-378.
10. DRILIAS, P, KARABOURNIOTIS, G, LEVIZOU, E., NIKOLOPOULOS, D., PETROPOULOU, Y. & MANETAS, Y., 1997. The effects of enhanced UV-B radiation on the Mediterranean evergreen sclerophyll *Nerium oleander* depend on the extent of summer precipitation. *Australian Journal of Plant Physiology* 24: 301-306.
11. MANETAS, Y., PETROPOULOU, Y., STAMATAKIS, K., NIKOLOPOULOS, D., LEVIZOU, E., PSARAS, G. & KARABOURNIOTIS, G., 1997. Beneficial effects of enhanced UV-B radiation under field conditions: improvement of needle water relations and survival capacity in *Pinus pinea* L. seedlings during the dry Mediterranean summer. *Plant Ecology*, 128: 100-108.

12. GRAMMATIKOPOULOS, G., KYPARISSIS, A., DRILIAS, P., PETROPOULOU, Y. & MANETAS, Y., 1998. Effects of UV-B radiation on cuticle thickness and nutritional value of leaves in two Mediterranean evergreen sclerophylls. *Journal of Plant Physiology* 153: 506-512.
13. GRAMMATIKOPOULOS, G., PETROPOULOU, Y. & MANETAS, Y., 1999. Site depended differences in transmittance and UV-B absorbing capacity of isolated leaf epidermises and mesophyll in *Urginea maritima* (L.) Baker. *Journal of Experimental Botany* 50: 517-521.
14. STEPHANOU, M., PETROPOULOU, Y., GEORGIU, O. & MANETAS, Y., 2000. Enhanced UV-B radiation, flower attributes and pollinator behaviour in *Cistus creticus*: a Mediterranean field study. *Plant Ecology*, 147: 165-171.
15. MANETAS, Y. & PETROPOULOU, Y., 2000. Nectar amount, pollinator visit duration and pollination success in the Mediterranean shrub *Cistus creticus*. *Annals of Botany* 86: 815-820.
16. GRAMMATIKOPOULOS, G., DRILIAS, P., KYPARISSIS, A., PETROPOULOU, Y., & MANETAS, Y., 2001. Reduction of ambient UV-B radiation does not affect growth but may change the flowering pattern of *Rosmarinus officinalis* L. *Plant Ecology* 154: 119-122.
17. KYPARISSIS, A., DRILIAS, P., PETROPOULOU, Y., GRAMMATIKOPOULOS, G. & MANETAS, Y., 2001. Effects of UV-B radiation and additional irrigation on the Mediterranean evergreen sclerophyll *Ceratonia siliqua* L. under field conditions. *Plant Ecology* 154:189-193.
18. PETROPOULOU, Y., GEORGIU, O., PSARAS, G.K. & MANETAS, Y., 2001. The growth, flower properties and demography of *Anthemis arvensis* exposed to enhanced UV-B radiation. *Plant Ecology* 154: 59-64.
19. PETROPOULOU, Y., GEORGIU, O., PSARAS, G.K. & MANETAS, Y., 2001. Improved flower advertisement, pollinator rewards and seed yield by enhanced UV-B radiation in the Mediterranean annual *Malcolmia maritima* (L.) R. Br. *New Phytologist* 152: 85-90.
20. MANETAS, Y., DRINIA, A. & PETROPOULOU, Y., 2002. High contents of anthocyanins in young leaves are correlated with low pools of xanthophyll cycle components and low risk of photoinhibition. *Photosynthetica* 40: 349-354.

21. MANETAS, Y., PETROPOULOU, Y., PSARAS, G. K. & DRINIA, A., 2003. Exposed red (anthocyanic) leaves of *Quercus coccifera* display shade characteristics. *Functional Plant Biology* 30: 265-270.
22. LEVIZOU, E., KARAGEORGOU, P., PETROPOULOU, Y., GRAMMATIKOPOULOS, G. & MANETAS Y., 2004. Induction of ageotropic response in lettuce radicle growth by epicuticular flavonoid aglycons of *Dittrichia viscosa*. *Biologia Plantarum* 48: 305-307.
23. LEVIZOU, E., PETROPOULOU, Y. & MANETAS, Y., 2004. Total carotenoid amount in crude twig extracts may be overestimated due to interference by high contents of co-extracted phenolics. *Photosynthetica*, 42: 295-297.
24. LEVIZOU, E., PETROPOULOU, Y. & MANETAS, Y., 2004. Carotenoid composition of peridermal twigs does not fully conform to a shade acclimation hypothesis. *Photosynthetica*, 42: 591-596.
25. KOTAKIS, CH., PETROPOULOU, Y., STAMATAKIS, K., YIOTIS, CH. & MANETAS, Y., 2006. Evidence for active cyclic electron flow in twig chlorenchyma in the presence of an extremely deficient linear electron transport activity. *Planta*, 225: 245-253.
26. KONOPLYOVA, A., PETROPOULOU, Y., YIOTIS, C., PSARAS, G.K. & MANETAS, Y., 2008. The fine structure and photosynthetic cost of structural leaf variegation. *Flora: Morphology, Distribution, Functional Ecology of Plants* 203: 653-662.
27. YIOTIS, CH., PETROPOULOU, Y. MANETAS, Y., 2009. Photosynthesis in light-remote plant tissues: evidence for light-independent and steeply decreasing PSII efficiency along twig depth in four tree species. *Photosynthetica* 47: 223-231.
28. ZELIOU, K., MANETAS, Y., PETROPOULOU, Y., 2009. Transient winter leaf reddening in *Cistus creticus* characterizes weak (stress-sensitive) individuals, yet anthocyanins cannot alleviate the adverse effects on photosynthesis. *Journal of Experimental Botany* 60: 3031-3042.

Review

29. BJÖRN, L.O., CALLAGHAN, T.V., JOHNSEN, I., LEE, J.A., MANETAS, Y., PAUL, N.D., SONESSON, M., WELLBURN, A.R., COOP, D., HEIDEJORGENSEN, H.S., GEHRKE, C., GWYNN-JONES, D., JOHANSON, U.,

KYPARISSIS, A., LEVIZOU, E., NIKOLOPOULOS, D., PETROPOULOU, Y. & STEPHANOU, M., 1997. The effects of UV-B radiation on European Heathland Species. *Plant Ecology*, 128: 252-264.

Citations

610 citations from other researchers (self-citations not included, Source: SCI Expanded, Web of Science, Scopus).

Reviewer in International Journals

Plant Ecology, Canadian Journal of Botany, Environmental and Experimental Botany, Journal of Experimental Botany, Physiologia Plantarum, Journal of Biological Research and Journal of Arid Environments

Member of scientific societies

FESPB (Federation of European Societies of Plant Biology)

Hellenic Society of Biological Sciences

Hellenic Society of Botany

Hellenic Ecological Society