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Present Position:

- Researcher at the Biomedical Engineering and Applied Biophysics Laboratory, School of Electrical Engineering and Computing, National Technical University of Athens, Greece

Education:

- 1990-1995 B.S. in Physics, University of Athens
- 1996-2002 Ph.D in Biomedical Engineering and Applied Biophysics
- 2003 Nomination to Doctor of Philosophy of the National Technical University of Athens.
- 2004-2007 Main Postdoc Researcher in the project Pythagoras of the Ministry of National Education and Religious Affairs, entitled “Advanced methods of Optical Imaging and Computer Vision for Cancer Diagnosis”.

Research Interests

- Functional Imaging and Optical Manipulation of Living Cells and Tissues.
- Photodynamic therapy of cancer.
- Fluorescence spectroscopy of cells and tissues
- Image Processing and Analysis and Expert Systems in the Diagnosis of Cancer

Selected Publications

1. E. Alexandratou, D. Yova, P. Handris, D. Kletsas and S. Loukas, “Human fibroblasts alterations induced by low power laser irradiation at the single cell level using confocal microscopy.”, *Photochem. Photobiol. Sci.*, 1: 547-552, 2002.
2. E. Alexandratou, D. Yova, S. Loukas, “A confocal microscopy study of the very early cellular response to oxidative stress induced by zinc phthalocyanine sensitization”, *Free Radical Biology & Medicine*, 39, 1119-1127, 2005.
3. S. Psilodimitrakopoulos, G. Filippidis, C. Kouloumentas, E. Alexandratou, D. Yova, “Combined two-photon excited fluorescence and second harmonic generation imaging microscopy of collagen structures”, *Multiphoton Microscopy in the Biomedical Sciences VI*, SPIE, 6089, 291-299, 2006
4. A. Johansson, J. Svensson, N. Bendsöe, K. Svanberg, E. Alexandratou, M. Kyriazi, D. Yova, S. Graefe, T. Trebst, S. Andersson-Engels, “Fluorescence and absorption

assessment of a lipid mTHPC formulation following topical application in a non-melanotic skin tumor model”, *J. Biomed. Opt.*, 12: 034026, 2007.

5. M. Kyriazi, E. Alexandratou, D. Yova, M. Rallis, T. Trebst, “Topical photodynamic therapy of murine non-melanoma skin carcinomas with aluminum phthalocyanine chloride and a diode laser: pharmacokinetics, tumor response and cosmetic outcomes”, *Photodermatol Photoimmunol Photomed.*, 24: 87-94, 2008.
6. E. Alexandratou, V. Atlamazoglou, T. Thireou, G. Agrogiannis, D. Togas, N. Kavantzias, E. Patsouris, D. Yova, “Evaluation of machine learning techniques for prostate cancer diagnosis and Gleason grading”, Special Issue on: "Classify the Classifiers: Investigating the Optimum Classification Technique Per Case in Bioinformatics", *International Journal of Computational Intelligence in Bioinformatics and Systems Biology*, 1(3), 297-315, 2010.