

## CURRICULUM VITAE

| PERSONAL INFORMATION |                              |
|----------------------|------------------------------|
| SURNAME              | SOPHIANOPOULOU               |
| NAME                 | VICKY                        |
| e-mail               | VICKY@BIO.DEMOKRITOS.GR      |
| TEL.                 | 0030-210-6503563, 2106503602 |

| CURRENT POSITION(S) |  |
|---------------------|--|
| 2004 -today         | <b>Research Director</b><br>Institute of Biosciences and Applications (IBA), National Centre for Scientific Research “Demokritos” (NCSR), Greece |

| PREVIOUS POSITION(S) |   |
|----------------------|---|
| 1999 -2004           | <b>Senior Researcher</b><br>Institute of Biosciences and Applications, NCSR, Greece                   |
| 1995 -1999           | <b>Research Associate</b><br>Institute of Biosciences and Applications, NCSR, Greece                  |
| 1994 -1995           | <b>Postdoctoral research collaborator</b><br>Institute of Biosciences and Applications, NCSR, Greece  |
| 1993 -1994           | <b>Postdoctoral research collaborator</b><br>School of Medicine, University of Crete, Greece          |
| 1990-1992            | <b>Postdoctoral research collaborator</b><br>IMBB-ITE, Crete, Greece                                  |
| 1989-1990            | <b>Postdoctoral research collaborator</b><br>Department of Microbiologie, Université Paris XI, France |

| EDUCATION  |   |
|------------|---|
| 1985 -1989 | Institut de Microbiologie, Université de Paris XI, CNRS, Centre d’ Orsay, France, Thèse de Doctorat (PhD) «Science de la Vie – Molecular Biology» Le groupe des gènes <i>prn</i> implique dans la dégradation de la L-proline chez <i>Aspergillus nidulans</i> : Séquence du gène <i>prnB</i> codant pour la permease de la L-proline, régulation des gènes <i>prn</i> et caractérisation de mutations régulatrices <i>cis</i> -actives». Degree: Excellent |
| 1984 -1985 | Department of Biology, Section Molecular, Cellular and Developmental Biology, University of Crete, Greece & D.E.A. de Genetique et Physiologie des Microorganismes, Institut de Microbiologie, Université Paris-Sud, Centre d’Orsay, France   |
| 1981 -1984 | Department of Biology, University of Essex, UK, B.Sc. in Cellular Biology, Honors Class II Division I   |

### Research interests

My group is primarily interested in the function, regulation and organization of the fungal plasma membrane (PM). The plasma membrane, as the boundary between the cell and its environment, is a platform for numerous functions. A major challenge is to understand how the PM coordinates these diverse processes while maintaining its barrier function, and the mechanisms underlay them.

The general concept of our work is to understand how specific compartments/domains of the plasma membrane named eisosomes regulate their structure and function to promote the activity and /or trafficking of nutrient transporters, persistence of fungal cells, critical stress responses and how these phenomena are related to long-term survival and fungal pathogenicity (*I. Vangelatos et al., 2010; C. Scazzocchio et al., 2011; A. Athanasopoulos et al., 2013, 2015; Gournas et al, 2018; Athanasopoulos et al., 2019, Megarioti et al., 2023*). In this context, we recently added the *in vivo* evaluation of specific dendritic nanoparticles as drug delivery systems and /or antifungal substances.

Our models of choice are two of the most genetically tractable organisms: The non-pathogenic ascomycetes *Aspergillus nidulans* and the budding yeast *Saccharomyces cerevisiae*, fungi that have been extensively exploited for the discovery of a plethora of mechanisms underlying biological processes and for which state of the art genetic tools are available.

The work of my team has contributed to the understanding of the above processes, mainly in two subjects:

A) Regulation of expression, structure-function relationships, specificity, trafficking and evolution of amino acid transporter proteins

B) The organization of the lateral compartmentalization of the fungal plasma membrane

*Long-term objectives:* identification of new pharmaceutical targets and future development of highly-targeted antifungals/vaccines.

In addition, our studies aimed at understanding the molecular mechanism(s) used by soil fungi to detoxify and catabolize the toxic substances produced by plants of nutritional and economic significance as defense mechanisms (e.g., L-Azetidine-2-Carboxylic Acid (AZC) a toxic analogue of proline). In nature, AZC has a protective role for the plants that produce it, and at the same time is a toxic substance for a multitude of organisms, including various bacteria, fungi and even mammals.

*Medium and long-term objectives:* rational design novel and specialized antifungal substances to protect crops of nutritional and economic significance.

## Publications

**Thèse de Doctorat** 27/04/1989 «Le groupe des gènes *prn* impliqués dans la dégradation de la L-proline chez *Aspergillus nidulans*: Séquence du gène *prnB* codant pour la permease de la L-proline, régulation des gènes *prn* et caractérisation de mutations régulatrices *cis*-actives», Institut de Microbiologie, Université de Paris-XI, CNRS, Centre d'Orsay, France.

## Peer-Reviewed articles

- The effect of copper on the antifungal activity of polyethyleneimines against quiescent conidia and germlings of *Aspergillus nidulans* Tsiourvas D, Sideratou Z, Mavrogonatou E, Kletsas D, Sophianopoulou V, Gerostathis S. *Sci Rep* 2025 15:25711 <https://doi.org/10.1038/s41598-025-11018-6>
- *In vitro* subcellular localization and antifungal activity of functionalized hyperbranched polyethyleneimine derivatives against quiescent conidia and germlings of the opportunistic fungal pathogen *Aspergillus nidulans*. Gerostathis S, Athanasopoulos A, Panagiotaki K. N, Sideratou Z, Tsiourvas D, Sophianopoulou V. *Journal of Biological Regulators & Homeostatic Agents (JBRHA)*, 2024, 38(4): 2781–2794 <https://doi.org/10.23812/j.biol.regul.homeost.agents.20243804.217>
- Ferroptosis-Protective Membrane Domains in Quiescence. Megarioti H. A, Esch B. M., A *et al.*, *Cell Reports* 42, 2023 113561 DOI: <https://doi.org/10.1016/j.celrep.2023.113561>
- Quantitative Analysis of *Aspergillus nidulans* Growth Rate using Live Microscopy and Open-Source Software. Athanasopoulos A, Biratsi A, Gournas C, Sophianopoulou V. *J. Vis. Exp.* e62778, 2021, DOI: [10.3791/62778](https://doi.org/10.3791/62778)
- A highly conserved mechanism for the detoxification and assimilation of the toxic phytoproduct L-azetidine-2-carboxylic acid in *Aspergillus nidulans*. Biratsi A, Athanasopoulos A, Kouvelis VN, Gournas C, Sophianopoulou V. *Sci. Rep.*, 11, 7391, 2021, DOI: [10.1038/s41598-021-86622-3](https://doi.org/10.1038/s41598-021-86622-3)
- The Bull1/2 Alpha-Arrestins Promote Ubiquitylation and Endocytosis of the Can1 Permease upon Cycloheximide-Induced TORC1-Hyperactivation. Megarioti AH, Primo C, Kapetanakis GC, Athanasopoulos A, Sophianopoulou V, André B, Gournas C. *Int. J. Mol. Sci.* 22, 10208. 2021. DOI: [10.3390/ijms221910208](https://doi.org/10.3390/ijms221910208)
- Fungal plasma membrane domains. A. Athanasopoulos, B. André, V. Sophianopoulou, C. Gournas. *FEMS Microbiol Rev*, 43(6): 642-673, 2019, DOI: [10.1093/femsre/fuz022](https://doi.org/10.1093/femsre/fuz022)
- On the evolution of specificity in members of the Yeast Amino Acid Transporter family as parts of specific metabolic pathways. C. Gournas, A. Athanasopoulos, V. Sophianopoulou. *Int J Mol Sci*, 19(5):1398, 2018, DOI: [10.3390/ijms19051398](https://doi.org/10.3390/ijms19051398)
- Comparative genomics reveals high biological diversity and specific adaptations in the industrially and medically important fungal genus *Aspergillus*. R. P. de Vries,....., V. Sophianopoulou et al. *Genome Biol*, 18(1):28, 2017, DOI: [10.1186/s13059-017-1151-0](https://doi.org/10.1186/s13059-017-1151-0)
- Eisosomes and membrane compartments in the ascomycetes: a view from *Aspergillus nidulans*. Scazzocchio C, Vangelatos I, Sophianopoulou V. *Commun & Integ Biol*, 4 (1), pp. 64-68. 2017. DOI: [10.4161/cib.4.1.13764](https://doi.org/10.4161/cib.4.1.13764)
- Characterization of AnNce102 and its role in eisosome stability and sphingolipid biosynthesis. A. Athanasopoulos, C. Gournas, S. Amillis, V. Sophianopoulou. *Sci Rep*, Oct 15;5:15200, 2015, DOI: [10.1038/srep15200](https://doi.org/10.1038/srep15200)
- The *Aspergillus nidulans* proline permease as a model for understanding the factors determining substrate binding and specificity of fungal amino acid transporters. C. Gournas, T. Evangelidis, A. Athanasopoulos, E. Mikros, V. Sophianopoulou. *J Biol Chem*, 6;290(10):6141-55, 2015, DOI: [10.1074/jbc.M114.612069](https://doi.org/10.1074/jbc.M114.612069)
- Eisosome distribution and localization in the meiotic progeny of *Aspergillus nidulans*. Athanasopoulos A, Boleti H, Scazzocchio C, Sophianopoulou V. *Fungal Genet Biol*, 53, pp. 84-96. 2013. <https://doi.org/10.1016/j.fgb.2013.01.002>

- *Aspergillus nidulans* CkiA is an essential casein kinase I required for delivery of amino acid transporters to the plasma membrane. Apostolaki A, Harispe L, Calcagno-Pizarelli AM, Vangelatos I, Sophianopoulou V, Arst Jr, HN, Peñalva MA, Amillis S, Scazzocchio C. *Mol Microbiol*, 84 (3), pp. 530-549. 2012. DOI: [10.1111/j.1365-2958.2012.08042.x](https://doi.org/10.1111/j.1365-2958.2012.08042.x)
  - Eisosome organisation in the filamentous ascomycete *Aspergillus nidulans*. I. Vangelatos, K. Roumelioti, C. Gournas, T. Suarez, C. Scazzocchio and V. Sophianopoulou. *Eukaryot Cell*, 9(10):1441-1454, 2010, DOI: [10.1128/EC.00087-10](https://doi.org/10.1128/EC.00087-10)
  - A cryptic role of a glycolytic gluconeogenic enzyme (aldolase) in amino acid transporter turnover in *Aspergillus nidulans*. Roumelioti K, Vangelatos I, Sophianopoulou V. *Fungal Genet Biol*, 47 (3), pp. 254-267. 2010. DOI: [10.1016/j.fgb.2009.12.004](https://doi.org/10.1016/j.fgb.2009.12.004)
  - Modelling and mutational evidence identify the substrate binding site and functional elements in APC amino acid transporters. Vangelatos I, Vlachakis D, Sophianopoulou V, Diallinas G. *Mol. Membr. Biol.*, 26 (5-7), pp. 356-370. 2009. DOI: [10.1080/09687680903170546](https://doi.org/10.1080/09687680903170546)
  - AgtA, the dicarboxylic amino acid transporter of *Aspergillus nidulans*, is concertedly down-regulated by exquisite sensitivity to nitrogen metabolite repression and ammonium-elicited endocytosis. Apostolaki A, Erpapazoglou Z, Harispe L, Billini M, Kafasla P, Kizis D, Peñalva MA, Scazzocchio C, Sophianopoulou V. *Eukar. Cell*, 8 (3), pp. 339-352. 2009. DOI: [10.1128/EC.00270-08](https://doi.org/10.1128/EC.00270-08)
  - Two members of a network of putative Na<sup>+</sup>/H<sup>+</sup> antiporters are involved in salt and pH tolerance of the freshwater cyanobacterium *Synechococcus elongatus*. Billini M, Stamatakis K, Sophianopoulou V. *J. Bacteriol.*, 190 (19), pp. 6318-6329. 2008. DOI: [10.1128/JB.00696-08](https://doi.org/10.1128/JB.00696-08)
  - EglD, a putative endoglucanase, with an expansin like domain is localized in the conidial cell wall of *Aspergillus nidulans*. Bouzarelou D, Billini M, Roumelioti, K, Sophianopoulou V. *Fungal Genet. Biol.*, 45 (6), pp. 839-850. 2008. DOI: [10.1016/j.fgb.2008.03.001](https://doi.org/10.1016/j.fgb.2008.03.001)
  - The proline permease of *Aspergillus nidulans*: Functional replacement of the native cysteine residues and properties of a cysteine-less transporter. Kafasla P, Bouzarelou D, Frillingos S, Sophianopoulou V. *Fungal Genet. Biol.*, 44 (7), pp. 615-626. 2007. DOI: [10.1016/j.fgb.2007.01.011](https://doi.org/10.1016/j.fgb.2007.01.011)
  - Per(6-guanidino-6-deoxy) cyclodextrins: synthesis, characterisation and binding behaviour toward selected small molecules and DNA. N. Mourtzis, K. Eliadou, C. Aggelidou, V. Sophianopoulou, I. M. Mavridis and K. Yannakopoulou. *Org. Biomol. Chem.* 5 (1): 125-131. DOI: [10.1039/B614899A](https://doi.org/10.1039/B614899A)
  - The product of the *SHR3* orthologue of *Aspergillus nidulans* has restricted range of amino acid transporter targets. Erpapazoglou Z, Kafasla P, Sophianopoulou V. *Fungal Genet. Biol.*, 43 (4), pp. 222-233. 2006. DOI: [10.1016/j.fgb.2005.11.006](https://doi.org/10.1016/j.fgb.2005.11.006)
  - Transcription of purine transporter genes is activated during the isotropic growth phase of *Aspergillus nidulans* conidia. Amillis S, Cecchetto G, Sophianopoulou V, Koukaki M, Scazzocchio C, Diallinas G. *Mol. Microbiol.*, 52 (1), pp. 205-216. 2004. DOI: [10.1046/j.1365-2958.2003.03956.x](https://doi.org/10.1046/j.1365-2958.2003.03956.x)
  - Mutational analysis of the major proline transporter (PrnB) of *Aspergillus nidulans*. Tavoularis SN, Tazebay UH, Diallinas G, Sideridou M, Rosa A, Scazzocchio C, Sophianopoulou V. *Mol. Membr. Biol.*, 20 (4), pp. 285-297. 2003. DOI: [10.1080/0968768031000106339](https://doi.org/10.1080/0968768031000106339)
  - Nucleobase transporters as a novel tool in molecular pharmacology. Diallinas G. Sophianopoulou V. *Rev. Clin. Pharmacokinetics, International Edition* 16(1): 33-35. 2002. <http://www.scopus.com/record/display.url?eid=2-s2.0-0036271412&origin=resultslist&sort=plf-f&src=s&nlo=&nlr=&nls=&imp=t&sid=78AEE5377AD5ABAAC9C898B8D5CA6BB7>
  - Functional characterization of a maize purine transporter by expression in *Aspergillus nidulans*. E. Argyrou, V. Sophianopoulou, N. Schultes and G. Diallinas. *Plant Cell* 13 (4): 953-964. 2001. DOI: [10.1105/tpc.13.4.953](https://doi.org/10.1105/tpc.13.4.953)
  - Functional expression and cellular localization of a green fluorescent protein-tagged proline transporter in *Aspergillus nidulans*. Tavoularis S, Scazzocchio C, Sophianopoulou V. *Fungal Genet. Biol.*, 33 (2), pp. 115-125. 2001. DOI: [10.1006/fghi.2001.1280](https://doi.org/10.1006/fghi.2001.1280)
  - The "Balkan syndrome" of depleted uranium-effected leukemia: Facts and fears. Sideris EG, Georgakilas AG, Haveles KS, Konsta AA, Sophianopoulou V, Visvardis EE. *Journal of B.U.ON.*, 6 (3), pp. 231-235. 2001. Special Invited Review Article
  - Diversity of peripheral blood mononuclear cells as revealed by a novel multiple microgel 'comet assay'. Visvardis EE, Haveles KS, Pataryas TA, Margaritis LH, Sophianopoulou V, Sideris EG. *Env. Mol. Mut.*, 36 (1), pp. 32-39. 2000. DOI: [10.1002/1098-2280\(2000\)36:1<32::aid-em5>3.0.co;2-o](https://doi.org/10.1002/1098-2280(2000)36:1<32::aid-em5>3.0.co;2-o)
  - Alpha-particle-induced changes in the stability and size of DNA. Georgakilas AG, Haveles KS, Sophianopoulou V, Sakelliou L, Zarris G, Sideris EG. *Rad. Res*, 153 (3), pp. 258-262. 2000. DOI: [10.1667/0033-7587\(2000\)153\[0258:apicit\]2.0.co;2](https://doi.org/10.1667/0033-7587(2000)153[0258:apicit]2.0.co;2)
  - Effects of radical scavengers on radiation-induced DNA double strand breaks. Haveles KS, Georgakilas AG, Sideris EG, Sophianopoulou V. *Int. J. Rad. Biol.*, 76 (1), pp. 51-59. 2000. DOI: [10.1080/095530000139005](https://doi.org/10.1080/095530000139005)
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- Effects of gamma rays on the stability and size of DNA. Georgakilas AG, Sakelliou L, Sideris EG, Margaritis LH, Sophianopoulou V. *Rad. Res.*, 150 (4), pp. 488-491. 1998. <http://www.ncbi.nlm.nih.gov/pubmed/10669546>
- Chimeric purine transporters of *Aspergillus nidulans* define a domain critical for function and specificity conserved in bacterial, plant and metazoan homologues. Diallinas G, Valdez J, Sophianopoulou V, Rosa A, Scazzocchio C. *EMBO J.*, 17 (14), pp. 3827-3837. 1998. DOI: [10.1093/emboj/17.14.3827](https://doi.org/10.1093/emboj/17.14.3827)
- Preliminary studies on structure-function analysis of a major proline transporter (PRNB) of the filamentous fungus *Aspergillus nidulans*. Tavoularis SN, Tazebay U, Diallinas G, Scazzocchio C, Sophianopoulou V. *Amino Acids*. 13 (1), p. 31. 1997. <http://www.scopus.com/record/display.url?eid=2-s2.0-0030962764&origin=resultslist&sort=plff&src=s&st1=sophianopoulou&nlo=&nlr=&nls=&sid=78AEE5377AD5ABAAC9C898B8D5CA6BB7>
- The gene encoding the major proline transporter of *Aspergillus nidulans* is upregulated during conidiospore germination and in response to proline induction and amino acid starvation. Tazebay UH, Sophianopoulou V, Scazzocchio C, Diallinas G. *Mol. Microbiol.*, 24 (1), pp. 105-117. 1997. DOI: [10.1046/j.1365-2958.1997.3201689.x](https://doi.org/10.1046/j.1365-2958.1997.3201689.x)
- Structure-function analysis of purine transporters in *Aspergillus nidulans*. G. Diallinas, V. Sophianopoulou, L. Gorfinkiel, G. Cecchetto J., Valdez, A. Rosa and C. Scazzocchio. *Folia Microbiol.* 42(3): 260-261. 1997.
- Post-transcriptional control and kinetic characterization of proline transport in germinating conidiospores of *Aspergillus nidulans*. Tazebay UH, Sophianopoulou V, Cubero B, Scazzocchio C, Diallinas G. *FEMS Microbiol Lett.*, 132 (1-2), pp. 27-37. 1995. DOI: [10.1111/j.1574-6968.1995.tb07806.x](https://doi.org/10.1111/j.1574-6968.1995.tb07806.x)
- Amino acid transporters of lower eukaryotes: regulation, structure and topogenesis. Sophianopoulou V, Diallinas G. *FEMS Microbiol Rev*, 16 (1), pp. 53-75. 1995. DOI: [10.1111/j.1574-6976.1995.tb00155.x](https://doi.org/10.1111/j.1574-6976.1995.tb00155.x)
- Structure-function analysis of the proline permease (PRNB) of the filamentous fungus *Aspergillus nidulans*. Tazebay U, Sophianopoulou V, Rosa A, Scazzocchio C, Diallinas G. *Folia Microb.* (Prague) 39 (6), pp. 551-551. 1994. DOI: [10.1007/BF02814103](https://doi.org/10.1007/BF02814103)
- AUA1, a gene involved in ammonia regulation of amino acid transport in *Saccharomyces cerevisiae*. V. Sophianopoulou and G. Diallinas. *Mol. Microbiol.* 8 (1): 167-178. 1993. DOI: [10.1111/j.1365-2958.1993.tb01213.x](https://doi.org/10.1111/j.1365-2958.1993.tb01213.x)
- Operator derepressed mutations in the proline utilisation gene cluster of *Aspergillus nidulans*. V. Sophianopoulou, T. Suarez, G. Diallinas and C. Scazzocchio. *Mol. Gen. Genet.* 236: 209-213. 1993. DOI: [10.1007/BF00277114](https://doi.org/10.1007/BF00277114)
- The proline transport protein of *Aspergillus nidulans* is very similar to amino acid transporters of *Saccharomyces cerevisiae*. V. Sophianopoulou and C. Scazzocchio. *Mol. Microbiol.* 3(6): 705-714. 1989. DOI: [10.1111/j.1365-2958.1989.tb00219.x](https://doi.org/10.1111/j.1365-2958.1989.tb00219.x)

Overall, Dr. Sophianopoulou has published 42 peer-reviewed articles that have received >1700 citations from which ~1000 hetero-citations, with an h-index 21, 6 peer-reviewed chapters in Scientific Books, 64 abstracts in International and 51 abstracts in National meetings

#### CONFERENCES/WORKSHOPS/ (INTERNATIONAL)

- SMYTE 2025, Design, synthesis and evaluation of dicoumarol derivatives as ferroptosis-promoting antifungals inhibiting the eisosomal ubiquinone reductases. 3-7 September 2025, Stockholm Sweden
- SMYTE 2025, Copper-chelated Hyperbranched Polyethyleneimines as antifungal agents against *Aspergillus nidulans* fungal cells with low human cytotoxicity. 3-7 September 2025, Stockholm Sweden (Oral)
- EMBO "Chemical Biology 2024, Copper abundance in *Aspergillus nidulans* modulates its sensitivity to functionalized hyperbranched polyethyleneimine (PEI) antifungals." 9-12 September, Heidelberg, Germany
- EMBO Workshop, Membrane transporters as essential elements of cellular function and homeostasis. Lipid peroxidation-protective plasma membrane transporter domains in quiescent yeasts. 23-27 August 2022, MAICH, Chania, Greece (Oral)
- EMBO Workshop, Membrane transporters as essential elements of cellular function and homeostasis. Endocytosis of the tetraspan eisosome-resident proteins, a developmentally regulated membrane-remodelling mechanism. 23-27 August 2022, MAICH, Chania, Greece
- 31<sup>st</sup> Fungal Genetics Conference, 15-20 March 2022. Asilomar, Pacific Grove, CA, USA. Endocytosis of the tetraspan eisosome-resident proteins, a developmentally regulated membrane-remodeling mechanism
- 15<sup>th</sup> International Congress on Yeasts (ICY) and the 30th International Conference on Yeast Genetics and Molecular Biology. Eisosome membrane domains are essential for the long-term survival of Quiescent yeasts. August 23-27, 2021. Vienna, Austria
- 29<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology. Eisosomes in Quiescence. 18-22 August 2022 Gothenbourg, Sweden
- 43<sup>rd</sup> FEBS Congress "Biochemistry forever". Characterization of two distinct pathways for the detoxification and utilization of L-Azetidine-2-carboxylic acid in *Aspergillus nidulans*. July 7-12 2018, Prague, Czech Republic
- European Biotechnology Congress. Efficient enzymatic degradation and assimilation by soil fungi of a plant-protectant natural amino acid analogue. April 26-28, 2018, Athens, Greece

- 34<sup>th</sup> SMYTE. *Aspergillus nidulans* is able to detoxify and to utilize L-Azetidine-2-carboxylic acid as poor nitrogen source. 2016. Chania, Crete, Greece
  - 40<sup>th</sup> FEBS Congress “The biochemical Basis of Life”. Characterization of AnNce102 and its role in eisosome stability and sphingolipid biosynthesis. 2015 July 4-9 Berlin, Germany
  - 12<sup>th</sup> European Conference on Fungal Genetics. PrnB, the proline transporter of *Aspergillus nidulans*: a paradigm of the substrate translocation mechanism of fungal amino acid transporters. 2014. Seville, Spain
  - 27<sup>th</sup> Fungal Genetics Conference. Eisosome distribution and localization in the plasma membrane of *Aspergillus nidulans*. 2013. Asilomar, Pacific Grove, CA, USA
  - International Conference on Membrane Domains. Eisosomes in the sexual cycle of *Aspergillus nidulans*. 27-30 November 2012, Dijon, France
  - Leopoldina Workshop on Plasma Membrane Domains in Fungi and Plants. Patchy Prague 2010. Prague Czech Republic 10-13 October (oral presentation)
  - IMC9 A4 O2 “The Biology of Fungi”. Eisosome organization in the filamentous fungus *Aspergillus nidulans*. 1-6 August 2010. Edinburgh, UK
  - 11<sup>th</sup> International Congress on amino acids, peptides and proteins. Dicarboxylic amino acids transport in *Aspergillus nidulans*. August 3-7 2009. Vienna, Austria
  - 34<sup>th</sup> Febs Congress on Life’s Molecular Interaction. Molecular modelling study of PrnB, the major proline transporter of *Aspergillus nidulans*. 2009 July 4-8. Prague, Czech Republic
  - 33<sup>rd</sup> FEBS Congress of “Biochemistry and Cell Regulation”. EglD, a putative endoglucanase, with an expansin-like domain is localized in the conidial cell wall of *Aspergillus nidulans*. 2008, Athens. Greece
  - 32<sup>nd</sup> Febs Congress on Molecular Machines. A network of Na<sup>+</sup>/H<sup>+</sup> antiporters in the freshwater cyanobacterium *Synechococcus* sp. PCC 7942. 2007. Vienna, Austria
  - 13<sup>th</sup> International Cyclodextrin Symposium. Synthesis and characterization of per (6-guanidino-6-deoxy) cyclodextrins and studies of their effect on DNA. May 14 -17 2006. Torino, Italy
  - 3<sup>rd</sup> International Symposium on Nitrogen metabolism in Ascomycetes. Amino acid transporters in *Aspergillus nidulans*: regulation, functional analysis and expression. 2006. November 5 -9, San Jost Vistahermosa, Molero, Mexico (Invited speaker)
  - SMYTE 16. The proline permease of *Aspergillus nidulans*: functional significance of the native cysteine residues and properties of a cysteine-less transporter. 2006. August 31 – September 3, Prague, Czech Republic
  - 31<sup>th</sup> FEBS Congress. The *Aspergillus nidulans* aspartate/glutamate transporter reveals new mechanisms of amino acid uptake regulation. 2006. June 24-29, Istanbul, Turkey
  - Decoding Nature: Hierarchy of Interactions 2nd International Symposium. Molecular and functional characterization of a Na<sup>+</sup>/H<sup>+</sup> antiporter of the cyanobacterium *Synechococcus* sp. PCC 7942. 2005. March 17-19, Göttingen, Germany
  - EU-US Workshop on Molecular signatures of DNA damage induced stress responses. Patterns of DNA DSBs SSBs and alkali-labile sites induction and repair in gamma-irradiated human lymphocytes using alkaline and neutral pulsed field gel electrophoresis. 2003. 26-30 September Cortona, Italy
  - XXI Yeast Meeting. Structure-Function analysis of the major proline transporter of *Aspergillus nidulans* (PrnB) using Cys-scanning mutagenesis. 2003. Stockholm, Sweden
  - 28<sup>th</sup> FEBS Meeting. Structure-Function analysis of the major proline transporter of *Aspergillus nidulans*. 2003. 20-25 October. Istanbul, Turkey
  - 5<sup>th</sup> European Workshop on the Molecular Biology of Cyanobacteria. Isolation and characterization of a Na<sup>+</sup>/H<sup>+</sup> antiporter gene from *Synechococcus* sp. PCC 7942. 2002. June 9-12, Stockholm, Sweden
  - 48<sup>th</sup> Annual Meeting, Radiation Res. Soc. Distribution of DNA strand breaks in  $\gamma$ -irradiated human lymphocytes. 2001. April 21-25, Puerto Rico, USA
  - 48<sup>th</sup> Annual Meeting, Radiation Res. Soc. DNA damage, repair and induction of apoptosis in lymphocytes of patients with chronic lymphocytic leukemia. 2001. April 21-25, Puerto Rico, USA
  - 19<sup>th</sup> SMYTE. Functional Expression and Cellular Localization of a Green Fluorescent Protein-Tagged Proline transporter In *Aspergillus nidulans*. 2001. September 14-17. Chania, Greece.
  - 2<sup>nd</sup> International Symposium on Nitrogen metabolism in Ascomyces. Functional characterization of a maize purine transporter by expression in *Aspergillus nidulans*. March 21-25, 2001, San Jost Vistahermosa, Molero, Mexico
  - 19<sup>th</sup> SMYTE. Expression of Plant and Human Nucleobase/Ascorbate Transporters in *Aspergillus nidulans*. 2001. September 14-17. Chania, Greece
  - Annual Meeting of the American Society of Plant Physiologists (ASPB). Characterization of Plant Nucleobase-Ascorbate Transporters. 2001 Rhode Island, USA
  - 27<sup>th</sup> FEBS Meeting. *Aspergillus nidulans* as a novel system for cloning and studying foreign nucleobase/ascorbate transporters. 2001. Lisbon, Portugal
  - 47<sup>th</sup> Annual Meeting of the Radiation Research Society, DSB’s/SSB’s ratio as a function of the antioxidant capacity of human peripheral blood mononuclear cells exposed to  $\gamma$ -rays. 2000. New Mexico, USA
  - 18<sup>th</sup> SMYTE. Functional characterization of a maize purine transporter by expression in *Aspergillus nidulans*. 2000. Ouro Preto, Brazil, p. 35
  - International Congress of Plant Molecular Biology. Functional characterization of Plant Nucleobase-Ascorbate Transporters. 2000. Quebec, Canada
  - 47<sup>th</sup> Annual Meeting of the Radiation Research Society. Differentiation of p53 accumulation and apoptosis in human peripheral blood mononuclear cells submitted to direct and indirect DNA breakage. 2000. Albuquerque, New Mexico, USA
  - NATO-FEBS Summer School, PROTEIN, LIPID AND MEMBRANE TRAFFIC: PATHWAYS AND TARGETING. Amino acid residues Q219 and K245 of PrnB affect the kinetics of proline transport in *Aspergillus nidulans*. 1999 Cargese, Corsica
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- 17<sup>th</sup> SMYTE. *Aspergillus nidulans* as a model system to study nucleobase transporters: structure relationships and expression of plant and human homologues. 1999. Cordoba, Spain
- 17<sup>th</sup> SMYTE. Mutational analysis of the proline transporter of *Aspergillus nidulans* shows non-random distribution of amino acid residues critical for function. 1999. Cordoba, Spain
- Gordon's Conference. Low doses of ionizing radiation can lead to DNA-DNA interactions in solution. 1999. Long Island, USA
- 46<sup>th</sup> Annual Meeting of the Radiation Research Society and the 17<sup>th</sup> Annual Meeting of the North American Hyperthermia Society.  $\alpha$ - and  $\gamma$ -radiation induced ability for DNA-DNA interactions in solution. 1999. Louisville, Kentucky, USA
- 46<sup>th</sup> Annual Meeting of the Radiation Research Society and the 17<sup>th</sup> Annual Meeting of the North American Hyperthermia Society. Radical Scavengers effects on mobility and thermostability of DNA molecules. 1999. Louisville, Kentucky, USA
- 25<sup>th</sup> Silver Jubilee FEBS Meeting. Analysis at the single cell level of the DNA repair capacity and induction of apoptosis in normal and Leukemic human lymphocytes under oxidative DNA damage. 1998. Copenhagen Denmark
- 16<sup>th</sup> SMYTE (FEMS). Genetic, molecular and biochemical approaches to study structure-function relationships in the proline transporter of *A. nidulans*. 1998. Casta-Papiernika, Slovakia
- 25<sup>th</sup> Silver Jubilee FEBS Meeting. Molecular characterization of mutations leading to cryosensitivity of the proline transporter (PrnB) mRNA steady state levels in *Aspergillus nidulans*. 1998. Copenhagen, Denmark
- Effects of Tris on the DNA structure and the problem of dsb's Induction by Ionizing Radiation. 1997. Radiat. Res.148, pp. 500-501
- NATO Advanced Study Institute (ASI), on "DNA DAMAGE AND REPAIR: Oxygen Radical Effects, Cellular Protection and Biological Consequences". Effects of Tris and Phenol in  $\gamma$ -Irradiated DNA Samples. 1997. Tekirova-Antalya, Turkey
- 5<sup>th</sup> International Workshop, "Radiation Damage to DNA: Techniques, Quantitation and Mechanisms". Effects of Tris on the DNA Structure and the Problem of Induction of Double-Strand Breaks by Ionizing Radiation. 1997. Windermere, UK
- 27<sup>th</sup> Annual Meeting of the European Society for Radiation Biology. Enhanced DNA Stability as a Result of Low Doses of  $\alpha$ - and  $\gamma$ -Irradiation. 1997. Radioprotection 32: 101-102
- 5<sup>th</sup> international Congress on Amino Acids. Preliminary studies on structure-function analysis of a major proline transporter (PrnB) of the filamentous fungus *Aspergillus nidulans*. 1997. Chalkidiki, Greece
- 14<sup>th</sup> SMYTE. Structure-Function Analysis of Purine Transporters in the Filamentous Fungus *Aspergillus nidulans*. 1997. Bonn, Germany
- 24<sup>th</sup> FEBS Meeting. Differential transcriptional activation of the prnB gene encoding the major proline transporter of *A. nidulans* in response to proline induction and amino acid starvation. 1996, Barcelona, Spain
- International Summer School on Molecular and Cellular Biology, NATO-EMBO-FEMS. Post Transcriptional Control and kinetic characterization of proline transport in germinated conidiospores of *A. nidulans*. 1995. Spetses, Greece
- 5<sup>th</sup> International Mycological Congress. The prn (proline utilization) gene cluster of *Aspergillus nidulans*. 1995. Vancouver, British Columbia, Canada
- 30<sup>th</sup> International Annual Meeting of SAIB. Isolation of a number of mutations of the L-proline membrane Permease (PRNB) of *Aspergillus nidulans* using classical and molecular genetic studies. 1994, Misiones, Argentina
- EMBO Workshop on «Control of Gene Expression in Filamentous Fungi». AUA1, a gene involved in ammonia regulation of amino acid transport in *Saccharomyces cerevisiae*. 1993. Majorca, Spain
- Sardinia Symposium on «Advances in Biotechnology Control of Gene Expression». Cis-acting regulatory mutations defining target sites for regulatory gene products in *Aspergillus nidulans*. 1989. Alghero, Sassari, Italy

## EXTERNAL COMPETITIVE FUNDING

17 Competitive Programs from the GSRT, GSRI, NSRF, Greek Ministry of Development, H.F.R.I. (Coordinator in 6)

4 Competitive Programs from EC (Coordinator in 1)

Total group funding: >1.000.000 Euros

## MEMBERSHIPS & REVIEWING ACTIVITIES

|                    |   |
|--------------------|---|
| <b>1995 –today</b> | Evaluator and Advisor of National (GSRT, Ministry of Education, Ministry of Development and Investments, H.F.R.I., IKY State Scholarships Foundation), NCSRDI (Industrial Research Fellowship Program of Stavros Niarchos), International Competitive Grants (IFS), UK Research and Innovation (UKRI) |
| <b>2018 –today</b> | Member of the editorial board of “The Open Mycology Journal” (Bentham Science) (2015-2017), Scientific Reports (Springer Nature) (2018 - today) & Methods and Protocols in Microbial Molecular Genetics (MDPI) (2021 - today).  |
| <b>2013 –today</b> | Member of the EUFGEN EUrotialles Functional GENomics Consortium   |
|                    | Member of the following scientific societies: EEBMB (Hellenic Society of Biochemistry & Molecular Biology), PEV (Panhellenic Association of Bioscientists), Hellenic Society of Mikrobiokosmos, AACR (American Association for Cancer Research) & EEE (Union of Greek researchers)                    |
|                    | Reviewer of peer-review articles in the field of Molecular Genetics & Cell Biology, published in International Scientific Journals  |

| ADMINISTRATION ACTIVITIES (MAIN) |   |
|----------------------------------|---|
| 2016-2017                        | Acting Vice Director of IBA, NCSR   |
| 2016-2017                        | Member of the Board of Directors of NCSR  |
| 2017 - 2018                      | Vice Director of IBA, NCSR  |
| 2002 - 2010                      | Member of the Scientific Counseling Board of IBA, NCSR  |
| 2004 - today                     | Head of the Microbial Molecular Genetics lab of IBA, NCSR   |
| 2005 - 2010                      | Member of the Education Committee of NCSR   |
| 1998 - 2009                      | Member (1998 - 99, 2004) & President (2005 - 2009) of the Education Committee of IBA  |
| 2001 - 2003                      | Member of the committee for the organization of scientific retreats at the IBA  |
| 2017                             | Responsible for the Animal Experimentation Facility of the Experimental Animal Colony of IBA & President of the Protocols Evaluation Committee  |
| 2017 - 2018                      | Member of the Advisory Committee on Scientific Issues of NCSR   |
| 2018 - today                     | Member or Depute member of the Electoral Body for the recruitment of Faculty members within 5 National Universities   |
| 2016 - today                     | President of the Evaluation Committees for the recruitment of new Researchers A & B, Assistant Staff Scientists, Graduate students, Post-doctorates & Collaborating Researchers within “Siemens” & the Industrial Research Fellowship Program of Stavros Niarchos at IBA & NCSR |
| 2018 - today                     | Member of the Inter-Departmental & the Co-ordination Committees of the joined MSc Programme “Applied Biochemistry: Clinical Chemistry, Biotechnology, Evaluation of Pharmaceutical Products”  |
| 2018 - today                     | External Examiner of the Evaluation Committee for the PhD thesis of students in National and International Universities (NKUA & Université de Paris-XI, Centre d’Orsay, France)   |
| 2018                             | Member of the committee for the Evaluation of Abstracts in European Biotechnology Congress (2018) & the 4th International Conference on Agricultural and Biological Sciences (ABS 2018)   |
| 2020                             | PC member of the 11 <sup>th</sup> Hellenic Conference on Artificial Intelligence (AI) (SETN 2020) Workshop titled “AI in Natural Sciences and Technology”, Athens   |
| 2021                             | Depute member of the Executive Committee for the evaluation of candidates for the election of the Director of IBA   |
|                                  | Honorable member of the Register of Certified Evaluators Law 4310 / 2014  |

| TEACHING ACTIVITIES |   |
|---------------------|---|
| 2018 - today        | Joined MSc Programme «Applied Biochemistry: Clinical Chemistry, Biotechnology, Evaluation of Pharmaceutical Products», Department of Chemistry, University of Patras & IBA, NCSR  |
| 2012 - 2023         | Molecular Biology: Systemic and <i>in silico</i> Approaches”, a Graduate Mandatory Course of the Interdisciplinary (Faculty of Biology and Medical School, National and Kapodistrian University of Athens. Two - Years Graduate Program “Applications of Biology in Medicine” |
| 2007 - 2012         | «Microbial Biotechnology-Model Systems of Molecular Microbiology» at the Department of Biology, National and Kapodistrian University of Athens  |
| 2003 - 2010         | Coordinator of the Post-Graduate Course “Chromatin structure and regulation of gene expression” at IB. NCSR   |
| 2000 - 2010         | Post-graduate course «Regulation of Gene Expression» & “Molecular Genetics” at IBA, NCSR  |

## SUPERVISION OF GRADUATE STUDENTS & POSTDOCTORAL FELLOWS

|                     |  |
|---------------------|--|
| <b>1995 - today</b> | 7 Postdoctoral fellows, IBA/NCSR/D/Greece  |
| <b>1995 - today</b> | 10 PhD students, IBA/NCSR/D/Greece (9 completed, 1 in progress)  |
| <b>1995 - today</b> | 4 Master Students, IBA/NCSR/D/Greece (completed)   |
| <b>1995 - today</b> | 20 Diploma Theses of under graduate students, IBA/NCSR/D/Greece  |
| <b>1995 - today</b> | 23 Practical training undergraduate students from Greek and European Universities, of which 3 Erasmus students |

## FELLOWSHIPS and AWARDS

|                    |   |
|--------------------|---|
| <b>1995</b>        | NATO Short-term Fellow for Postdoctoral Studies, Institut de Microbiologie, Université de Paris-XI, Centre d'Orsay, France                    |
| <b>1993 - 1994</b> | Postdoctoral research Fellow, School of Medicine, University of Crete, Greece   |
| <b>1990 - 1992</b> | Postdoctoral Grant, Institute of Molecular Biology and Biotechnology, (IMBB-ITE), Crete, Greece   |
| <b>1989 - 1990</b> | E.C. Grant for Postdoctoral Studies, Institut de Microbiologie, Université de Paris-XI, Centre d'Orsay, France                                |
| <b>1987 - 1989</b> | E.C. Grant for Doctoral Studies, Institut de Microbiologie, Université de Paris-XI, Centre d'Orsay, France.                                   |
| <b>1985 - 1987</b> | Post-Graduate Grant from Onassis - Foundation for Doctoral Studies, Institut de Microbiologie, Université de Paris-XI, Centre d'Orsay, France |
| <b>1984 - 1985</b> | Post-Graduate Training Grant, Institute of Molecular Biology and Biotechnology (IMBB - ITE), Crete, Greece                                    |

## SCIENTIFIC ACHIEVEMENTS

### *Invited presentations to international conferences and/or advanced schools*

- EMBO Workshop, Membrane transporters as essential elements of cellular function and homeostasis. Lipid peroxidation-protective plasma membrane transporter domains in quiescent yeasts. 23-27 August 2022, MAICH, Chania, Greece
  - 71<sup>st</sup> Conference of the Panhellenic Society for Biochemistry and Molecular Biology. A double mechanism for the detoxification and assimilation of the toxic phytoproduct L-azetidine-2-carboxylic acid in *Aspergillus nidulans*. 2021. November 26-28, 2021, NCSR/D, Athens, Greece
  - 62<sup>nd</sup> Conference of the Panhellenic Society for Biochemistry and Molecular Biology. Molecular organization of plasma membrane in fungi: subcellular distribution of eisosomal proteins in the ascomycete *Aspergillus nidulans*. December 2011. Athens, Greece
  - 27<sup>th</sup> Conference on Fungal Genetics. Membrane trafficking and molecular organization. 2013, Asilomar, CA, USA
  - 4<sup>th</sup> Congress of the Scientific Society Microbiokosmos. Organization of protein microdomains at the plasma membrane of fungi: eisosomes in *Aspergillus nidulans*. October 2011. Ioannina, Greece
  - Leopoldina Workshop on Plasma Membrane Domains in Fungi and Plants. Eisosomal organization in *Aspergillus nidulans*. Patchy Prague 2010. 10-13 October. Prague Czech Republic
  - IMC9 A4 O2 "The Biology of Fungi". Eisosome organization in the filamentous fungus *Aspergillus nidulans*. 1-6 August 2010. Edinburgh, UK
  - 31<sup>th</sup> Annual Scientific Conference of HSBS. Molecular mechanisms of endocytosis: eisosomal proteins in *Aspergillus nidulans*. 2009. Patras, Greece
  - 11<sup>th</sup> International Congress on amino acids, peptides and proteins. Dicarboxylic amino acids transport in *Aspergillus nidulans*. 2009. August 3-7. Vienna, Austria
  - 3<sup>rd</sup> International Symposium on Nitrogen metabolism in Ascomycetes. Amino acid transporters in *Aspergillus nidulans*: regulation, functional analysis and expression. 2006. November, San Jost Vistahermosa, Molero, Mexico
- Organization of international conferences*
- Member of the Organizing and Scientific committee of the Eurobiotech European Biotechnology Congress April 26-28, 2018, Athens, Greece
  - Co-Chair of the session "Functional Genomics and Proteomics (Short Talks)" στο 68<sup>th</sup> Conference of the Panhellenic Society for Biochemistry and Molecular Biology. November 10-12, 2017, Athens, Greece

- Member of the Organization and Scientific committee of the 5<sup>th</sup> Panhellenic congress of the scientific society Mikrobiokosmos. April 3-5, 2015. Athens, Greece
- Organization of the Membrane trafficking and molecular organization concurrent session of the 27<sup>th</sup> Fungal Genetics Conference. 2013, Asilomar, CA, USA
- Member of the Organization and Scientific committee of the 60<sup>th</sup> Conference of the Panhellenic Society for Biochemistry and Molecular Biology. December 2009. Athens, Greece
- Member of the Organization and Scientific committee of the 1<sup>st</sup> Panhellenic congress of the scientific society Mikrobiokosmos. December 12-14, 2008, NCSR, Athens, Greece
- Co-organiser of the 19<sup>th</sup> SMYTE, September 14-17, 2001. MAICH, Chania, Crete

*Major contributions to the early careers of excellent researchers*

- Former PhD students and postdocs of the lab under the supervision of VS have obtained tenure-track PI positions:
  - Dr. P. Kafasla, Senior Researcher, Institute of Immunology, BSRC “Alexander Fleming”, Greece
  - Dr. C. Gournas, Associate Researcher, MMG laboratory, IBA, NCSR)
  - Dr. C. Gournas, Chargé de recherches - Coordinateur Unité de recherche, LABIRIS, Bruxelles
  - Dr. D. Kizis, Senior Researcher, Benaki Phytopathological Institute.
  - Dr. Z. Erpapazoglou, Senior R&D Scientist at ResQ Biotech
  - Dr. M. Billini, Staff Scientist, Philipps University, Marburg, Germany

Dr. Sophianopoulou was member of the IBA team that has visited the “School of Second Chance” in Korydallos prison, in the framework of an educational course entitled: “Natural Sciences”, 2018

