Curriculum vitae

(2025)

Sotiris Amillis

Department of Biology, Section of Botany, Microbiology
National and Kapodistrian University of Athens (NKUA)
Panepistimiopolis 15784 Athens, Hellas, Greece
Tel: +302107274123, Email: samillis@biol.uoa.gr

Education

1991 High school degree, German School of Athens (http://www.dsathen.gr/de/)

1991-92 Faculty of Chemistry, Julius-Maximilian University Würzburg, Germany

1992-98 Diploma of Biology "*Mag. rer. nat.* Biologie, Botanik, Biochemie"
Paris-Lodron University of Salzburg, Austria (https://www.plus.ac.at/biowissenschaften/)
Thesis: "Untersuchungen zur Pathogenität einheimischer *Streptomyces*-Stämme in einem dynamischen Boden-Mikrokosmos System"

1999-04 Ph.D. *(Dr. rer. nat.)*, NKUA, Department of Biology
Thesis: "*Aspergillus nidulans* as a model system for the study of purine transporters"

2002-03 Military Services

Professional Experience

Research Interests:

Classical and molecular genetics of fungi. Structure-function relationships, regulation of expression, signalling and intracellular trafficking of transporters and other membrane proteins

2004-25 Research assistant in the Fungal Genetics and Molecular Biology Unit and the Enzyme and Microbial Biotechnology Unit, NKUA, Department of Biology, Section of Botany, Microbiology (http://en.biol.uoa.gr/sections/section-of-botany.html)

2010-12 Institute of Microbial Genetics, (IMIG), Department of Applied Genetics and Cell Biology, University of Natural Resources and Life Sciences (BOKU) Vienna, Austria (https://boku.ac.at/dagz/imig)

2014-25 Laboratory teaching stuff, NKUA, Department of Biology, Section of Botany (http://en.biol.uoa.gr/human-resources/laboratory-administrative-staff.html)

2022-23 Institute of Applied Biosciences (IAB), Department of Microbiology, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany (https://www.iab.kit.edu/)

2023-24 Institute of Microbial Genetics, (IMIG), Department of Applied Genetics and Cell Biology, University of Natural Resources and Life Sciences (BOKU) Vienna, Austria (https://boku.ac.at/dagz/imig)

2025- Assistant Professor of Molecular Microbiology, NKUA, Department of Biology, Section of Botany, Microbiology (http://en.biol.uoa.gr/sections/section-of-botany.html)

Teaching and Tutoring:

2004-22 Practical undergraduate courses "General Microbiology", "Molecular and Applied Microbiology" and diploma theses (NKUA, Department of Biology)

2006-20 Master's course: "Molecular Biotechnology" (NKUA, Department of Biology) (http://m-biotech.biol.uoa.gr/)

2014-20 Practical undergraduate courses "Genetics" (NKUA, Department of Biology), "Introduction to Botany" (NKUA, Department of Biology) and "General Botany" (NKUA, Department of Pharmacy)

2025- Undergraduate course "Molecular Microbiology" (NKUA, Department of Biology)

Publications

(https://pubmed.ncbi.nlm.nih.gov/?term=Amillis+S)
(https://www.scopus.com/authid/detail.uri?authorId=6508168101)
(https://scholar.google.gr/citations?hl=el&user=ZZwvYUcAAAAJ)
(https://orcid.org/0009-0001-8472-0018)
(https://www.webofscience.com/wos/author/record/JAC-0660-2023)

Peer-reviewed journals (*equal contribution #corresponding author):

1 Amillis S*, Koukaki M* and Diallinas G#. (2001). Substitution F569S converts UapA, a specific uric acid-xanthine transporter, into a broad specificity transporter for purine-related solutes. *J Mol Biol* 313: 765-774. https://doi.org/10.1006/jmbi.2001.5087

2 Cecchetto G, Amillis S, Diallinas G, Scazzocchio C and Drevet C#. (2004). The AzgA purine transporter of *Aspergillus nidulans*: characterisation of a protein belonging to a new phylogenetic cluster. *J Biol Chem* 279: 3132-3141. (Evaluated by F1000)
https://doi.org/10.1074/jbc.m308826200

3 Amillis S, Cecchetto G, Sophianopoulou V, Koukaki M, Scazzocchio C and Diallinas G#. (2004). Transcriptional activation of purine transporters during the conidial isotropic growth phase of *Aspergillus nidulans*. *Mol Microbiol* 52: 205-216.
https://doi.org/10.1046/j.1365-2958.2003.03956.x

4 Vlanti A*, Amillis S*, Koukaki M and Diallinas G#. (2006). A Novel-type Substrate-selectivity Filter and ER-exit Determinants in the UapA Purine Transporter. *J Mol Biol* 31: 808-819.
https://doi.org/10.1016/j.jmb.2005.12.070

5 Amillis S, Hamari Z, Roumelioti K, Scazzocchio C and Diallinas G#. (2007). Regulation of expression and kinetic modeling of substrate interactions of a uracil transporter in *Aspergillus nidulans*. *Mol Membr Biol* 24: 206-214.
https://doi.org/10.1080/09687860601070806

6 Goudela S, Reichard U, Amillis S and Diallinas G#. (2008). Characterization and kinetics of the major purine transporters in *Aspergillus fumigatus*. *Fungal Genet Biol* 45: 459-472.
https://doi.org/10.1016/j.fgb.2007.08.001

7 Papageorgiou I, Gournas C, Vlanti A, Amillis S, Pantazopoulou A and Diallinas G#. (2008). Specific Interdomain Synergy in the UapA Transporter Determines Its Unique Specificity for Uric Acid among NAT Carriers. *J Mol Biol* 382: 1121-1135. (*Evaluated by F1000*)
https://doi.org/10.1016/j.jmb.2008.08.005

8 Hamari Z*, Amillis S*, Drevet C, Apostolaki A, Vágvölgyi C, Diallinas G and Scazzocchio C#. (2009). Convergent evolution and orphan genes in the FUR4p-like family and characterisation of a general nucleoside transporter in *Aspergillus nidulans*. *Mol Microbiol* 73: 43-57.
https://doi.org/10.1111/j.13652958.2009.06738.x

9 Gournas C*, Amillis S*, Vlanti A* and Diallinas G#. (2010). Substrate-induced, function-dependent, endocytosis of the UapA purine transporter by ubiquitination. *Mol Microbiol* 75: 246-260.
https://doi.org/10.1111/j.1365-2958.2009.06997.x

10 Abreu C, Sanguinetti M, Amillis S and Ramon A#. (2010). UreA, the major urea/H^+ symporter in *Aspergillus nidulans*. *Fungal Genet Biol* 47: 1023-1033.
https://doi.org/10.1016/j.fgb.2010.07.004

11 Gournas C, Oestreicher N, Amillis S, Diallinas G and Scazzocchio C#. (2011). Completing the purine utilization pathway of *Aspergillus nidulans. Fungal Genet Biol* 48: 840-848.
https://doi.org/10.1016/j.fgb.2011.03.004

12 Amillis S, Kosti V, Pantazopoulou A and Diallinas G#. (2011). Mutational analysis and modeling reveal functionally critical residues in transmembrane segments 1 and 3 of the UapA transporter. *J Mol Biol* 411: 567-580.
https://doi.org/10.1016/j.jmb.2011.06.024

13 Apostolaki A, Harispe L, Calcagno-Pizarelli A, Vangelatos I, Sophianopoulou V, Arst HN Jr, Peñalva MA, Amillis S# and Scazzocchio C#. (2012). *Aspergillus nidulans* CkiA is an essential casein kinase I required for delivery of amino acid transporters to the plasma membrane. *Mol Microbiol* 84: 530-549.
https://doi.org/10.1111/j.1365-2958.2012.08042.x

14 Krypotou A, Kosti V, Amillis S, Myrianthopoulos V, Mikros E and Diallinas G#. (2012). Modeling, Substrate Docking and Mutational Analysis Identify Residues essential for the function and specificity of a Eukaryotic Purine-Cytosine NCS1 Transporter. *J Biol Chem* 287: 36792-36803.
https://doi.org/10.1074/jbc.m112.400382

15 Karachaliou M*, Amillis S*, Evangelinos M, Kokotos AC, Yalelis V and Diallinas G#. (2013). The arrestin-like protein ArtA is essential for ubiquitination and endocytosis of the UapA transporter in response to both broad-range and specific signals. *Mol Microbiol* 88: 301-317. (*Evaluated by F1000Prime*)
https://doi.org/10.1111/mmi.12184

16 Schinko T, Gallmetzer A, Amillis S and Strauss J#. (2013). Pseudo-constitutivity of nitrate-responsive genes in nitrate reductase mutants. *Fungal Genet Biol* 54: 34-41. https://doi.org/10.1016/j.fgb.2013.02.003

17 Sanguinetti M, Amillis S, Pandano S, Scazzocchio C and Ramón A#. (2014). Modeling and mutational analysis of *Aspergillus nidulans* UreA, a member of the subfamily of urea/H^+ transporters in fungi and plants. *Open Biol* 4: 140070. https://doi.org/10.1098/rsob.140070

18 Galanopoulou K, Scazzocchio C, Galinou M, Weiwei L, Borbolis F, Karachaliou M, Oestreicher N, Hatzinikolaou DG, Diallinas G# and Amillis S#. (2014). Purine utilization proteins in the Eurotiales: Cellular compartmentalization, phylogenetic conservation and divergence. *Fungal Genet Biol* 69: 96-108.
https://doi.org/10.1016/j.fgb.2014.06.005

19 Sá-Pessoa J, Amillis S, Casal M and Diallinas G#. (2015). Expression and specificity profile of the major acetate transporter AcpA in *Aspergillus nidulans*. *Fungal Genet Biol* 76: 93-103.
https://doi.org/10.1016/j.fgb.2015.02.010

20 Martzoukou O, Karachaliou M, Yalelis V, Leung J, Byrne B, Amillis S and Diallinas G#. (2015). Dimerization of the UapA purine transporter is critical for ER-exit, plasma membrane localization and turnover. *J Mol Biol*

427: 2679-2696.
https://doi.org/10.1016/j.jmb.2015.05.021

21 Athanasopoulos A, Gournas C, Amillis S and Sophianopoulou V#. (2015). Characterization of AnNce102 and its role in eisosome stability and sphingolipid biosynthesis. *Sci Rep* 5: 15200.
https://doi.org/10.1038/srep15200

22 Evangelinos M, Martzoukou O, Chorozian K, Amillis S and Diallinas G#. (2016). BsdA^{Bsd2}-dependent vacuolar turnover of a misfolded version of the UapA transporter along the secretory pathway: prominent role of selective autophagy. *Mol Microbiol* 100: 893-911.
https://doi.org/10.1111/mmi.13358

23 Alguel Y, Amillis S, Leung J, Lambrinidis G, Capaldi S, Scull NJ, Craven G, Iwata S, Armstrong A, Mikros E, Diallinas G#, Cameron AD# and Byrne B#. (2016). Structure of eukaryotic purine/H^+ symporter UapA suggests a role for homodimerization in transport activity. *Nat Commun* 7: 11336.
https://doi.org/10.1038/ncomms11336

24 Sioupouli G, Lambrinidis G, Mikros E, Amillis S# and Diallinas G#. (2017). Cryptic purine transporters in *Aspergillus nidulans* reveal the role of specific residues in the evolution of specificity in the NCS1 family. *Mo Microbiol* 103: 319-332.
https://doi.org/10.1111/mmi.13559

25 de Vries RP#, Riley R, Wiebenga A, Aguilar-Osorio G, Amillis S, (…), Dyer PS and Grigoriev VI. (2017). Comparative genomics reveals high biological diversity and specific adaptations in the industrially and medically important fungal genus *Aspergillus*. *Genome Biol* 18: 28.
https://doi.org/10.1186/s13059-017-1151-0

26 Martzoukou O, Amillis S, Zervakou A, Christoforidis S and Diallinas G#. (2017). The AP-2 complex has a specialized clathrin-independent role in apical endocytosis and polar growth in fungi. *Elife* 6: e20083.
https://doi.org/10.7554/elife.20083

27 Papadaki GF, Amillis S and Diallinas G#. (2017). Substrate specificity of the FurE transporter is determined by cytoplasmic terminal domain interactions. *Genetics* 207: 1387-1400.
https://doi.org/10.1534/genetics.117.300327

28 Pyle E, Kalli A, Amillis S, Hall Z, Hanyaloglu A, Diallinas G, Byrne B and Politis A#. (2018). Structural lipids enable the formation of functional oligomers of the eukaryotic purine symporter UapA. *Cell Chem Biol* 25: 840-848.e4.
https://doi.org/10.1016/j.chembiol.2018.03.011

29 Martzoukou O, Diallinas G# and Amillis S#. (2018). Secretory vesicle polar sorting, endosome recycling and cytoskeleton organization require the AP-1 complex in *Aspergillus nidulans*. *Genetics* 209: 1121-1138.
https://doi.org/10.1534/genetics.118.301240

30 Dimou S, Kourkoulou A, Amillis S, Percudani R and Diallinas G#. (2019). The peroxisomal SspA protein is redundant for purine utilization but essential for peroxisome localization in septal pores in *Aspergillus nidulans*. *Fungal Genet Biol* 132: 103259.
https://doi.org/10.1016/j.fgb.2019.103259

31 Sanguinetti M, Iriarte A*, Amillis S*, Marín M, Musto H and Ramón A#. (2019). A pair of nonoptimal codons are necessary for the correct biosynthesis of the *Aspergillus nidulans* urea transporter, UreA. *R Soc Open Sci* 6: 190773.
https://doi.org/10.1098/rsos.190773

32 Dimou S, Martzoukou O, Dionysopoulou M, Bouris V, Amillis S and Diallinas G#. (2020). Translocation of nutrient transporters to cell membrane via Golgi bypass in *Aspergillus nidulans*. *EMBO Rep* 21: e49929.
https://doi.org/10.15252/embr.201949929

33 Kalampokis I, Erban A, Amillis S, Diallinas G, Kopka J and Aliferis KA#. (2020). Untargeted metabolomics as a hypothesis-generation tool in plant protection product discovery: Highlighting the potential of trehalose and glycerol metabolism of fungal conidiospores as novel targets. *Metabolomics* 16: 79.
https://doi.org/10.1007/s11306-020-01699-7
(*featured article on journal cover; https://link.springer.com/journal/11306/volumes-and-issues/16-8*)

34 Martzoukou O, Glekas P, Avgeris M, Mamma D, Scorilas A, Kekos D, Amillis S and Hatzinikolaou DG#. (2022). The interplay between sulfur metabolism and desulfurization activity in *Rhodococcus qingshengii IGTS8*: Insights into a regulatory role of the reverse transsulfuration pathway. *mBio* 13: e0075422.
https://doi.org/10.1128/mbio.00754-22

35 Sanguinetti M, Santos LH, Dourron J, Alamón C, Idiarte J, Amillis S, Pantano S# and Ramón A#. (2022). Substrate recognition properties from an intermediate structural state of the UreA transporter. *Int J Mol Sci* 23: 16039.
https://doi.org/10.3390/ijms232416039

36 Martzoukou O, Amillis S*, Glekas P*, Breyanni D, Avgeris M, Scorilas A, Kekos D, Pachnos M, Mavridis G, Mamma D and Hatzinikolaou DG#. (2023). Advancing desulfurization in the model biocatalyst *Rhodococcus qingshengii* IGTS8 via an in locus combinatorial approach. *Appl Environ Microbiol* 89: e0197022
https://doi.org/10.1128/aem.01970-22

37 Varassas S, Amillis S, Pappas KM and Kouvelis VN#. (2024). The mitochondrial DNA polymerase γ (Mip1) of the entomopathogenic fungus *Metarhizium brunneum* reveals pleiotropic activity. *Microorganisms* 12: 1052

https://doi.org/10.3390/microorganisms12061052

38 Kourkoulou A, Martzoukou O, Fischer R and Amillis S[#]. (2024). A type II phosphatidylinositol-4 -kinase coordinates sorting of cargo polarizing by endocytic recycling. *Commun Biol* 7:855. https://doi.org/10.1038/s42003-024-06553-3

39 Martzoukou O[#], Oikonomou A, Amillis S and Hatzinikolaou DG[#]. (2025). Amplicon analysis of Dictean cave microbial communities and essential oils as a mild biocide. *Microbes Environ 40(3).* https://doi.org/10.1264/jsme2.ME24115

40 Georgiou X, Politi S, Amillis S and Diallinas G[#]. (2025). VapA/Scs2 sustains polarized growth in *Aspergillus nidulans* by maintaining AP-2-mediated apical endocytosis. *bioRxiv* https://doi.org/10.1101/2025.07.16.665121

Review articles-Book Chapters:

1 Alguel Y[#], Amillis S, Pyle E, Politis A, Mikros E, Cameron AD, Diallinas G and Byrne B. (2018) Structural aspects of UapA, the H^+-xanthine/uric acid transporter from *Aspergillus nidulans*. In: Roberts G., Watts A. (eds). *Encyclopedia of Biophysics* Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-35943-9_10089-1

2 Ramón A[#], Sanguinetti M, Santos LH and Amillis S. (2024). Understanding fungal and plant active urea transport systems: keys from *Aspergillus nidulans* and beyond. *Biochem Biophys Res Commun*. 735: 150801 https://doi.org/10.1016/j.bbrc.2024.150801

Congresses-Workshops:

International: 51
National: 32

Editorial boards:

2021- *Journal of Fungi* (https://www.mdpi.com/journal/jof/editors)
2019- *Scientific Reports* (https://www.nature.com/srep/about/editors#microbiology)