

Curriculum Vitae

Name Rousidou Konstantina
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Studies

- BSc (4 year degree) in Biochemistry and Biotechnology, Department of Biochemistry and Biotechnology, University of Thessaly, Greece (Final Grade 7.29/10). Title of Thesis: *The impact of olive mill wastewater on the soil microbial community*, Supervisor: Dr Dimitrios G. Karpouzas
- MSc (2 year degree) Biotechnology – Quality of the Nutrition and the Environment, Department of Biochemistry and Biotechnology, University of Thessaly, Greece, Title of Thesis: *The impact of synthetic and biological pesticides on the structure and abundance of the soil nitrifying community via TRFLP and qPCR analysis*. Supervisor: Dr Dimitrios G. Karpouzas
- PhD in the area of Environmental Microbiology and Biotechnology, Title of Thesis: *Isolation of bacteria that degrade carbamate insecticides and characterization of the functional and ecological role of bacterial genes involved in their hydrolysis in soil*. Supervisor: Dr Dimitrios G. Karpouzas

Research-Work experience

- Research Project DESMI, *Evaluation of biobeds for the decontamination of wastewater of agroindustrial origin*, Funding Body: Research Promotion Foundation of Cyprus, Duration: 16/11/2009 – 31/03/2010
- Marie Curie Reintegration Grand ECOMYCORRHIZA - *The effects of agronomic practices conducive to organic agriculture on the diversity and function of arbuscular mycorrhizal fungi*, Benefited Fellow: Dr I. Ipsilantis, Funding Body: European Commission FP7 Proposal Number 204792 Duration: 01/03/2011 – 31/05/2011

- SEE.ERA-NETplus, Title: *Development and implementation of innovative tools to estimate the ecotoxicological impact of low dose pesticide application in agriculture on soil functional microbial diversity – ECOFUN-MICROBIODIV*. Funding Body: EU/DLR, Duration: 1/10/2011 - 31/05/2012
- Industrial Project, Title: *A survey of the degradation of the soil insecticide fipronil, fosthiazate, chlorpyrifos and ethroprophos in potato cultivation areas in Greece*. Funding body: Agrochemical Company, Duration: 01/11/2013 - 31/12/2013
- EXCELLENCE II, *The microbial detoxification of pesticides from the fruitpackaging industry: using omics in bioremediation (BIOREMEDIAT-OMICS)*. Funding Body: General Secretariat of Research and Technology, Greece. Duration: 20/02/2014 - 31/7/2015
- IAPP Marie Curie project, Title: *Pesticides – Felicity or curse for the soil microbes (Acronym LOVE-TO-HATE)*. Funding Body: European Commission, FP7, Duration: 15/06/2016 - 30/11/2016
- Synthetic Biology: From omics technologies to genomic engineering (OMIC-ENGINE). Funding Body: Co-financed by the European Regional Development Fund of the European Union and Greek national funds. Duration: 25/1/2019 - 15/4/2019
- Creation of a national network in the value chain of the olive tree. Funding Body: General Secretariat for Research and Technology, Greece. Duration: 5/11/2019 - 29/10/2020
- Synthetic Biology: From omics technologies to genomic engineering (OMIC-ENGINE). Funding Body: Co-financed by the European Regional Development Fund of the European Union and Greek national funds. Duration: 1/12/2020 - 31/3/2022

Languages

Greek: Native English: Fluent

Main research interests

Environmental Microbiology: Isolation and characterization of bacteria degrading pesticides and of the genetic mechanisms driving this process

Microbial Ecology: Impact of agricultural practices and pesticides on the structure and function of the soil microbial community

Publications in peer-reviewed journals

1. Karpouzas D. G., **Rousidou C.**, Papadopoulou K. K., Bekris F., Zervakis G., Singh B. K., Ehaliotis C. (2009). Effect of continuous olive mill wastewater applications, in the presence and absence of N fertilization, on the structure of rhizosphere soil fungal communities. *FEMS Microbiology Ecology* 70(3): 388-401.
2. **Rousidou C.**, Papadopoulou K. K., Zervakis G., Singh B. K., Ehaliotis C., Karpouzas, D. G. (2010). Repeated application of diluted olive mill wastewater induces changes in the structure of the soil microbial community. *European Journal of Soil Biology* 46: 34-40.
3. Karpouzas D. G., Ntougias S., Iskidou E., **Rousidou C.**, Papadopoulou K. K., Zervakis G., Ehaliotis C. (2010). Olive mill wastewater affects the structure of soil bacterial communities. *Applied Soil Ecology* 45: 101-111.
4. Omirou M., **Rousidou C.**, Bekris F., Papadopoulou K. K., Ehaliotis C., Menkissoglu-Spiroudi U., Karpouzas D. G. (2011). The impact of biofumigation and chemical fumigation methods on the structure and function of the soil microbial community. *Microbial Ecology* 61: 201-213.
5. Karpouzas D. G., Karatasas A., Spyridaki E., **Rousidou C.**, Bekris F., Ehaliotis C., Papadopoulou K. K. (2011). Impact of a beneficial and of a pathogenic *Fusarium* strain on the fingerprinting-based structure of microbial communities in tomato (*Lycopersicon esculentum* Mill.) rhizosphere. *European Journal of Soil Biology* 47(6): 400-408.
6. Moulas C., Petsoulas C., **Rousidou K.**, Perruchon C., Karas P., Karpouzas D. G. (2013). Effects of systemic pesticides imidacloprid and metalaxyl on the phyllosphere of pepper plants. *BioMed Research International* Volume 2013:969750.
7. **Rousidou C.**, Papadopoulou E., Kortsinidou M., Giannakou I. O., Singh B. K., Menkissoglu-Spiroudi U., Karpouzas D.G. (2013). Bio-pesticides: Harmful or harmless to ammonia oxidizing microorganisms? The case of a *Paecilomyces lilacinus*-based nematicide. *Soil Biology and Biochemistry* 67: 98-105.
8. **Rousidou C.**, Chanika E., Georgiadou D., Soueref E., Katsarou D., Kolovos P., Ntougias S., Tourna M., Tzortzakakis E. A., Karpouzas D. G. (2016). Isolation of oxamyl-degrading bacteria and identification of *cehA* as a novel oxamyl hydrolase gene. *Frontiers in Microbiology* 7: 616.
9. Papazlatani C., **Rousidou C.**, Katsoula A., Kolyvas M., Genitsaris S., Papadopoulou K. K., Karpouzas D. G. (2016). Assessment of the impact of the fumigant dimethyl disulfide on the dynamics of major fungal plant pathogens in greenhouse soils. *European Journal of Plant Pathology* 146 (2): 391-400.

10. **Rousidou C.**, Karaiskos D., Myti D., Karanasios E., Karas P., Tourna M., Tzortzakakis E. A., Karpouzas D. G. (2017). Distribution and function of carbamate hydrolase genes *cehA* and *mcd* in soils: the distinct role of soil pH. *FEMS Microbiology Ecology* DOI: <http://dx.doi.org/10.1093/femsec/fiw219>.
11. Perruchon, C., Vasileiadis S., **Rousidou C.**, Papadopoulou E. S., Tanou G., Samiotaki M., Garagounis C., Molassiotis A., Papadopoulou K. K., Karpouzas D. G. (2017). Metabolic pathway and cell adaptation mechanisms revealed through genomic, proteomic and transcription analysis of a *Sphingomonas haloaromaticamans* strain degrading ortho-phenylphenol. *Scientific Reports* 7: Article 6449, doi:10.1038/s41598-017-06727-6.
12. Papadopoulou E. S, Perruchon C., Vasileiadis S., **Rousidou K.**, Tanou G., Samiotaki M., Molassiotis A., Karpouzas D. G. (2018). Metabolic and evolutionary insights in the transformation of diphenylamine by a *Pseudomonas putida* strain unravelled by genomic, proteomic and transcription analysis. *Frontiers in Microbiology* 9: 676, doi: 10.3389/fmicb.2018.00676.
13. Gallego-Blanco S., Devers-Lamrani M., **Rousidou K.**, Karpouzas D. G., Martin-Laurent F. (2019). Assessment of the effects of oxamyl on the bacterial community of an agricultural soil exhibiting enhanced biodegradation. *Science of the Total Environment* 651: 1189-1198.

Abstracts in conferences

1. Karatasas A., Bekris F., **Rousidou C.**, Karpouzas D. G., Ehaliotis C., Papadopoulou K. (2008) Effects of root colonization by pathogenic and endophytic soil fungi on the soil fungal community in the rhizosphere of tomato plants. 1st National Conference of the Scientific Society Microbiokosmos, 12-14 December 2008, Athens, Greece, pp. 92-94 (poster).
2. Omirou M., **Rousidou C.**, Bekris F., Spyrou I., Karpouzas D. G., Papadopoulou K., Menkisoglu-Spiroudi U., Ehaliotis C. (2008) Effects of conventional and biofumigation techniques on the soil microbial community. 1st National Conference of the Scientific Society Microbiokosmos, 12-14 December 2008, Athens, Greece, pp. 168-170 (poster).
3. **Rousidou C.**, Bekris F., Karpouzas D. G., Papadopoulou K. K., Zervakis G., Ehaliotis C. (2008) Effect of continuous olive mill wastewater applications, in the presence and absence of N fertilization, on the structure of the soil fungal community. 1st National Conference of the Scientific Society Microbiokosmos, 12- 14 December 2008, Athens, Greece, pp. 208-210 (poster).

4. Chanika E., Georgiadou D., **Rousidou C.**, Karpouzas D. G. (2011) Oxamyl degrading bacteria: isolation, characterization and the gene involved the hydrolysis of carbamates. XIV Symposium in Pesticide Chemistry, Piacenza 30 Aug – 1 Sept, Italy (poster).
5. **Rousidou K.**, Karaiskos D., Karas P., Karanasios E., Tzorzakakis E. A., Karpouzas D. G. (2014) Exploring the biodegradation potential of potato cultivated soils for the carbamate nematicide oxamyl: The role of pH and cehA gene. First Global Soil Biodiversity Conference, 2-5 December 2014, Dijon, France (poster).
6. Perruchon C., **Rousidou K.**, Vasileiadis S., Amoutzias G., Papadopoulou E., Tanou G., Molassiotis A., Karpouzas D. G. (2014) Isolation and characterization of bacteria able to degrade pesticides used in the fruit-packaging industry. First Global Soil Biodiversity Conference, Dijon, France, 2-5 December 2014 (poster).
7. **Rousidou K.**, Karaiskos D., Karanasios E., Myti D., Tzortzakakis E., Karpouzas D. G. (2015) The distribution of carbamate hydrolase genes in monoculture agricultural areas and their involvement in the rapid biodegradation of carbamate pesticides. 6 th Symposium of the Society of Mikrobiokosmos, 3-5 April 2015, Athens, Greece (poster).
8. Perruchon C., **Rousidou K.**, Papadopoulou E. S., Batianis C., Zouborlis S., Vasileiadis S., Tanou G., Molassiotis A., Amoutzias G., Karpouzas D. G. (2015). Isolation and proteogenomic characterization of a diphenylamine-degrading *Pseudomonas putida* bacterium. 6th Symposium of the Society of Mikrobiokosmos, Athens, Greece, 3-5 April 2015 (poster).
9. Perruchon C., Papadopoulou E. S., **Rousidou K.**, Vasileiadis S., Tanou G., Amoutzias G., Karpouzas D. G. (2015). A proteogenomic analysis of a *Sphingomonas haloaromaticamans* strain able to degrade the fungicide ortho-phenylphenol used in the fruit-packaging industry. 6th Symposium of the Society of Mikrobiokosmos, Athens, Greece, 3-5 April 2015 (oral presentation).
10. Katsoula A., Papazlatani C., Papadimitriou A., **Rousidou C.**, Papadopoulou K. K., Karpouzas D. G. (2015). Estimation of the population levels of soil-born fungal plant pathogens in soils from greenhouses in Western Greece via q-PCR 6th Symposium of the Society of Mikrobiokosmos, 3-5 April 2015, Athens, Greece (poster).
11. Perruchon C., Papadopoulou E., **Rousidou K.**, Vasileiadis S., Tanou G., Molassiotis A., Amoutzias G., Karpouzas D. G. (2015). Isolation and proteogenomic analysis of a *Sphingomonas haloaromaticamans* strain able to degrade the fungicide ortho-phenylphenol used in the fruit-packaging industry. 13th Symposium on Bacterial Genetics and Ecology (BAGECO), 14-18 June 2015, Milan, Italy (poster).

12. Perruchon C., Baguelin C., Tourna M., **Rousidou C.**, Vasileiadis S., Storck V., Martin-Laurent F., Karpouzas D. G. (2018). Functional metagenomic analysis of biobed systems: an invaluable source of genes for the degradation of pesticides. 17th International Symposium on Microbial Ecology (ISME), Leipzig, Germany, 12-17 August 2018 (poster).