## Curriculum Vitae

***First name:*** *Sotirios*
***Surname****: Vasileiadis*
***Date and Place of Birth****: 18/04/1977, Veroia, Greece*
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**Studies - Degrees:**

- PhD in the Department of Agricultural and Environmental Chemistry of Universitá Cattolica del Sacro Cuore (Piacenza, Italy), specializing in targeted metagenomics and bioinformatics; degree conferred in 2012. Thesis title: "*Reflections of ecosystem services on the agricultural soil prokaryotic phylogenetic and functional diversity: PCR based approaches in prokaryotic ecology*".
- MSc in Organic Farming, specialization in plant pathology and molecular plant-microbe interactions and biocontrol at Wageningen University (The Netherlands); degree conferred in 2008;
- Diploma in Agricultural Sciences with specialization in plant production at the Aristotle University of Thessaloniki (Greece; 5-year degree / MSc-equivalent); degree conferred in 2003;

**Relevant employment history:**

- From May the 20th 2021 until today: Assistant Professor at the Group of Plant and Environmental Biotechnology of the Department of Biochemistry and Biotechnology of the University of Thessaly (at Viopolis, in Larissa, Greece) at the field of Microbial Molecular-Ecology / Genomics.
- From October the 1st 2019 until the 5th February 2021: lecturer fellow at UTh (Greece) for the courses of General Biology (BΛ0101), Antidoping in sports (BK2201), and Specific Topics in Microbial Ecology (BX0902).
- From July the 1st 2019 until July the 30th 2020: research fellow at AUTh (Greece) at the project entitled "Novel technologies at anaerobic digestion aiming at methane production increase" (# 95663, action Research-Create-Innovate, EU Partnership Agreement 2014-2020. Topic: Characterization of the microbial population using massively parallel sequencing of the 16S rRNA gene aiming at the monitoring of population shifts in continuous stirred-tank reactors (CSTR).
- Marie Skłodowska Curie Actions Individual Fellowship fellow from July 1st of 2017 until June the 30th 2019. Project title "EMIGRATE: Exploring MIcrobial networking in pesticides biodegradation; novel inocula and biocatalysts for biodepuration of agro-industrial Effluents". Meta-genomics/transcriptomics/bolomics/proteomics methods and high throughput techniques heavily relying in large-dataset bio/chemo-informatics were implemented by the fellow for achieving the project aims. The project website can be found at: http://emigrate.bio.uth.gr
- Research Associate, FII (former CERAR) UniSA, from March 2014 to March 2017. Research Topic: *Microbial ecology of metal stressed environments (soil, water, wastewater, biosolids) and horizontal gene transfer events in wastewater* (supervised by E Donner and E Lombi). Tasks: experimental plan and protocol setup for screening microbial diversity and functions using high throughput sequencing (HTS) of phylogenetic marker genes combined with shotgun meta- genomics/transcriptomics and associated bio-informatics/statistics; student supervision and training; Assigned as Coordinator of the FII Microbiology Lab since May 1st 2015.
- Postdoctoral Researcher, Universitá Cattolica del Sacro Cuore, Feb 2012 – Feb 2014. Research topic: *Effects of synthetic and natural pesticides on the soil microbial communities* (SNAC project, supervised by M Trevisan). Tasks: protocol setup/performance for microbial diversity screening with HTS of phylogenetic marker genes and associated bio-informatics/statistics; genomics; student supervision and training.
- Research Assistant, Universitá Cattolica del Sacro Cuore, Dec 2011. Research topic: SNAC project (see above). Tasks: protocol setup/performance, microbial diversity screening with HTS of

phylogenetic marker genes and associated bio-informatics/statistics.

- Research Assistant, NIOO-KNAW (Netherlands Institute of Ecology; currently in Wageningen, the Netherlands, supervised by JH Leveau and J Raaijmakers), Aug – Nov 2007. Research topic: *High throughput screening of large insert metagenomic libraries using fluorescent in situ hybridization (FISH) and flow cytometry*. Tasks: handling of the metagenomic library (fosmids/*E. coli* hosts); FISH protocol development; epi-fluorescent microscopy; flow cytometry.

**Industrial innovation:**

- Contract and industry-academia collaboration with Advanced Analytical Technologies (AAT, Piacenza, Italy; www.aat-taa.eu); bioinformatics/statistics tasks; projects managed by Dr S Soldi.
- An industry-academia collaboration (UniSA-ECAS4) for the setup and application of molecular biology protocols in testing the antimicrobial efficacy of anolytes.

**Grants/Awards:**

*Project Grants Received/Partnered*

- External collaborator (contracted from 25 August to 5 October 2019 through the UniSA, and consultant until today) at the Australian Medical Research Future Fund (MRFF) Frontiers project entitled OUTBREAK. The project scope is to tackle antibiotic resistance at an One Health approach (https://outbreakproject.com.au; https://www.linkedin.com/company/outbreak-project/). OUTBREAK is let by the University of Technology of Sydney and is a competence buildup initiative funded with 1 million Australian dollars divided among 14 organizations for the development of an antimicrobial resistance "knowledge engine" capable of predicting outbreaks and informing interventions. As part of the purpose of OUTBREAK, the project developed tools will be implemented in a followup 5-year monitoring and implementation project if funded. My tasks are mainly related to setting up the bioinformatics analysis of animal, natural and built environmental metagenomes for the identification and relative quantification of antibiotic resistance genes and phylogenetic markers among other data analysis tasks.
- Project coordinator of Marie Skłodowska Curie H2020 Individual Fellowship [IF] for the period July 2017 – June 2019. Title: "EMIGRATE: Exploring MIcrobial networking in pesticides biodegradation; novel inocula and biocatalysts for biodepuration of agro-industrial Effluents". Project number 749463 with maximum estimated funding of €152,653.20.
- Joint Chief Investigator (JCI) in the South Australian PRIF International Research Grant Program IRPG 45 with partners from Nereus COST-action, the IWRC (University of Cyprus, Cyprus) and the Volcani Center (Agricultural Research Organisation, Israel), 2015-2020, (Donner, Lombi, Vasileidis, Thierry, Fatta-Kassinos, Cytryn). Total funding $992,000 (SA PRIF: A$400,000; UniSA: A$180,000; Nereus A$292,000; Volcani $120,000). "Transfer and control of antibiotic resistance bacteria and their genes during wastewater treatment and reuse".
- JCI in South Australian PRIF Industry Linkage Research Grant with ECAS4 Industry Partner, 2014-2015, (Elmas, Donner, Nann, Lombi, Vasileidis). Total funding A$232,800 (ECAS4: A$140,000; SA PRIF: A$92,800). "Sanitisation and disinfection using electrochemically generated disinfectants".
- Australian Synchrotron Access Grant; 48 h beamtime on the X-ray Absorption Spectroscopy beamline, April 2015. "Role of soil properties in controlling silver selective pressure and its effects on soil bacterial communities." (AS151/XAS/9123; Donner, Lombi, Vasileidis, Brunetti). As the commercial rate for synchrotron beamtime is currently $15K/day, this is the equivalent of $30K in facility access funding.

*Networking grant*

ECRNA – ERC Networking Award. Visiting researcher in the Dept of Biotech. and Biochem. of the UTh (Thessaly, Greece) June/July 2015 (Australian- A - $5,550).

*Awards-Scholarships*

Italian Society of Agricultural Chemistry PhD thesis distinction award (500 €) /// PhD scholarship (~45,000 € total / 3 years) /// MSc scholarship (~21,000 € total / 2 years)

**Student supervision and support and teaching activities at workshops/summerschools:**

- Actively engaged in research student co-supervision and training since the latter stages of PhD. Co-supervision of PhD students, MSc students and several visiting students. Also refereed a PhD thesis.
- Teaching support activities, training of students and visiting researchers in molecular biology

laboratory methods; teaching bioinformatics and associated statistical methods; assisting with the reporting of related research results; conducting student evaluation.

- Teaching of bioinformatics courses at the Biochemistry and Biotechnology department of the University of Thessaly (1-week crash course with modules entitled "DNA sequencing", "Bacterial genome assembly primer" and "Bacterial genome assembly practical", 20-27 Feb 2018 and 15-22/12/2019 within the context of the Advanced and Experimental Computational Biosciences MSc programme, Viopolis, Larissa; contact: dpt head professor Matthiopoulos Konstantinos) and invited speaker at the Mikrobiokosmos 2018 Summer-School (session entitled "Prokaryotic genome assembly and annotation", 24-28 June, Moni Paou, Argalasti, Volos) and the NEREUS COST-action ES1403 Training School (session "Next generation sequencing approaches for ARB & ARGs screening in wastewater, soil and plant environments", 29-31 May, Nicosia, Cyprus).
- Teaching the courses of "General Biology" (theory and laboratory, BΛ0101; 1st semester undergraduate school, of the academic year 2019-2020), and "Antidoping in sports" (BK2201; 8th semester undergraduate school, of the academic year 2019-2020) at the department of Biochemistry and Biotechnology of UTh, Greece.

**Academic reviewing activity:**

- **Peer reviewed journals:** Scientific Reports (NPG), Soil Biology and Biochemistry, Journal of Applied Microbiology, Applied Environmental Soil Science, BIOMED Research International, Environmental Science and Pollution Research, International Journal of Microbiology, Pedobiologia, Science of the Total Environment, The Scientific World Journal, Waste Management & Research, **Water Research**, **Ecology Letters**, **Associate Review Editor** in **Frontiers in Microbiology** since July 2015.
- **Grants: Australian Research Council (ARC)** National Competitive Grants Program (NCGP) assessor since Oct. 2018. **Natural Environment Research Council (UK)** reviewer since Nov. 2018.

## Publication list

***[BC] Scholarly book chapters***

1. Voolaid V, Donner E, **Vasileiadis S**, Berendonk T (2017). Bacterial diversity and antibiotic resistance genes in wastewater treatment plant influents and effluents. In Antimicrobial resistance in the wastewater treatment process. Keen, P. L. and Fugère, R. eds. (Hoboken, New Jersey, USA: Wiley Blackwell), pp 157-178.
2. **Vasileiadis S**, Puglisi E, Cocconcelli PS, Trevisan M (2013). Screening phylogenetic and functional marker genes in soil microbial ecology. In Omics in soil science. Nannipieri, P, Pietramellara G and Renella G. eds. (Norfolk, UK: Caister Academic Press), pp 45-61.

***[PP] Preprints***

1. **Vasileiadis S**, Perruchon C, Scheer B, Adrian L, Steinbach N, Trevisan M, Plaza-Bolanos P, Aguera A, Chatzinotas A, Karpouzas DG (2020). Nutritional inter-dependencies and a carbazole-dioxygenase are key elements of a bacterial consortium relying on a Sphingomonas for the degradation of the fungicide thiabendazol. bioRxiv, 2020.2003.2030.015693. (history: submitted and reviewed for the Microbiome journal and rejected with resubmission ability – one extra brief experiment requested plus restructuring of the text – its currently under revision)
2. Papadopoulou ES, Bachtsevani E, Lampronikou E, Adamou E, Katsaouni A, Thion C, **Vasileiadis S**, Menkissoglu- Spiroudi U, Nicol GW, Karpouzas DG (2020). Comparison of the in vitro activity of novel and established nitrification inhibitors applied in agriculture: challenging the effectiveness of the currently available compounds. bioRxiv, 2020.2004.2007.023168

***[J] Peer reviewed journals***

(*Web of Science™ Publons:* ***total citations 609; average IF 4.6; H-index 16****)*
*(Google Scholar:* ***total citations 941; H-index 19****)*

1. Christou ML, **Vasileiadis S**, Karpouzas DG, Angelidaki I, Kotsopoulos TA (2021). Effects of organic loading rate and hydraulic retention time on bioaugmentation performance to tackle ammonia inhibition in anaerobic digestion. Bioresour Technol, 125246
2. Katsoula A, **Vasileiadis S**, Karamanoli K, Vokou D, Karpouzas DG (2021). Factors Structuring the

Epiphytic Archaeal and Fungal Communities in a Semi-arid Mediterranean Ecosystem. Microb Ecol
3. Papadopoulou ES, Bachtsevani E, Lampronikou E, Adamou E, Katsaouni A, **Vasileiadis S**, Thion C, Menkissoglu-Spiroudi U, Nicol GW, Karpouzas DG (2020). Comparison of Novel and Established Nitrification Inhibitors Relevant to Agriculture on Soil Ammonia- and Nitrite-Oxidizing Isolates. Front Microbiol 11
4. Katsoula A, **Vasileiadis S**, Sapountzi M, Karpouzas DG (2020). The response of soil and phyllosphere microbial communities to repeated application of the fungicide iprodione: Accelerated biodegradation or toxicity? FEMS Microbiol Ecol
5. Shar S, Shahsavari E, Reith F, Alghamdi OA, Yamani HA, AlJudaibi A, Donner E, **Vasileiadis S**, Ball AS (2020). Dose-related changes in respiration and enzymatic activities in soils amended with mobile platinum and gold. Appl Soil Ecol
6. Papadopoulos C, Karas PA, **Vasileiadis S**, Ligda P, Saratsis A, Sotiraki S, Karpouzas DG (2020). Host species determines the composition of the prokaryotic microbiota in Phlebotomus sandflies. Pathogens 9, 428
7. Storck V, Gallego S (equal contribution with 1st author), **Vasileiadis S (equal contribution with 1st author)**, Hussain S, Béguet J, Rouard N, Baguelin C, Perruchon C, Devers-Lamrani M, Karpouzas DG, Martin-Laurent F (2020). Insights into the function and horizontal transfer of isoproturon-degrading pdmAB genes in a biobed system. Appl Environ Microbiol, AEM.00474-00420
8. Ogbughalu OT, **Vasileiadis S**, Schumann RC, Gerson AR, Li J, Smart RSC, Short MD (2020). Role of microbial diversity for sustainable pyrite oxidation control in acid and metalliferous drainage prevention. J Hazard Mater 393, 122338
9. Diquattro S, Garau G, Mangia NP, Drigo B, Lombi E, **Vasileiadis S**, Castaldi P (2020). Mobility and potential bioavailability of antimony in contaminated soils: Short-term impact on microbial community and soil biochemical functioning. Ecotoxicol Environ Saf 196, 110576
10. Perruchon C, **Vasileiadis S (equal contribution with 1st author)**, Papadopoulou ES, Karpouzas DG (2020). Genome-based metabolic reconstruction unravels the key role of b12 in methionine auxotrophy of an ortho-phenylphenol-degrading Sphingomonas haloaromaticamans. Front Microbiol 10
11. Kalamaras SD, **Vasileiadis S**, Karas P, Angelidaki I, Kotsopoulos TA (2020). Microbial adaptation to high ammonia levels during anaerobic digestion of manure-based feedstock; Biomethanation and 16S rRNA gene sequencing. J Chem Technol Biotechnol
12. Katsoula A, **Vasileiadis S**, Sapountzi M, Karpouzas DG (2020). The response of soil and phyllosphere microbial communities to repeated application of the fungicide iprodione: Accelerated biodegradation or toxicity? FEMS Microbiol Ecol
13. Khaksar M, **Vasileiadis S**, Sekine R, Brunetti G, Scheckel KG, Vasilev K, Lombi E, Donner E (2019). Chemical characterisation, antibacterial activity, and (nano)silver transformation of commercial personal care products exposed to household greywater. Environmental Science: Nano
14. Soldi, S, **Vasileiadis, S**, Lohner, S, Uggeri, F, Puglisi, E, Molinari, P, Donner, E, Decsi, T S, Sailer, M, Theis, S (2019; doi 10.3920/bm2018.0116). Prebiotic supplementation over a cold season specifically modulates the gut microbiota composition of 3 to 6 year-old children. Beneficial Microbes
15. Suciu, N, **Vasileiadis, S**, Puglisi, E, Pertile, G, Tourna, M, Pappolla, A, Ferrarini, A, Sulowicz, S, fornasier, F, Lucini, L, Karpouzas, D, Trevisan, M (2019; doi 10.1016/j.apsoil.2019.01.016) Azadirachtin and trifloxystrobin had no inhibitory effects on key soil microbial functions even at high dose rates. Appl Soil
16. **Vasileiadis, S**, Puglisi, E, Papadopoulou, E S, Pertile, G, Suciu, N, Pappolla, R A, Tourna, M, Karas, P A, Papadimitriou, F, Kasiotakis, A, Ipsilanti, N, Ferrarini, A, Sułowicz, S, Fornasier, F, Menkissoglu-Spiroudi, U, et al. (2018). Blame it on the metabolite: 3,5-dichloraniline rather than the parent compound is responsible for decreasing diversity and function of soil microorganisms. Appl Environ Microbiol, doi 10.1128/aem.01536-18, **spotlight article**
17. **Vasileiadis, S**, Brunetti, G, Marzouk, E, Wakelin, S, Kowalchuk, G A, Lombi, E, Donner, E (2018). Silver toxicity thresholds for multiple soil microbial biomarkers. Environ Sci Technol, 52, 8745–8755
18. Papadopoulou, E S, Perruchon, C, **Vasileiadis, S**, Rousidou, C, 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. Front Microbiol 9

19. Lohner, S, Jakobik, V, Mihályi, K, Soldi, S, **Vasileiadis, S**, Theis, S, Sailer, M, Sieland, C, Berényi, K, Boehm, G, Decsi, T (2018). Inulin-type fructan supplementation of 3 to 6 year-old children is associated with higher fecal bifidobacterium concentrations and fewer febrile episodes requiring medical attention. The Journal of Nutrition, 148, 1300-1308
20. Karas, P A, Baguelin, C, Pertile, G, Papadopoulou, E S, Nikolaki, S, Storck, V, Ferrari, F, Trevisan, M, Ferrarini, A, Fornasier, F, **Vasileiadis, S**, Tsiamis, G, Martin-Laurent, F, Karpouzas, D G (2018). Assessment of the impact of three pesticides on microbial dynamics and functions in a lab-to-field experimental approach. Sci Total Environ 637-638, 636-646
21. Mandal, S, Donner, E, **Vasileiadis, S**, Skinner, W, Smith, E, Lombi, E (2018). The effect of biochar feedstock, pyrolysis temperature, and application rate on the reduction of ammonia volatilisation from biochar-amended soil. Sci Total Environ 627, 942-950
22. Hassan, H, Jin, B, Donner, E, **Vasileiadis, S**, Saint, C, Dai, S (2018). Microbial community and bioelectrochemical activities in MFC for degrading phenol and producing electricity: Microbial consortia could make differences. Chem Eng J 332, 647-657
23. Perruchon, C, **Vasileiadis, S**, Rousidou, K, Papadopoulou, E, Tanou, G, Samiotaki, M, Garagounis, C, Molassiotis, A, Papadopoulou, K, Karpouzas, D (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, 6449
24. Garau G, Silvetti M, **Vasileiadis S**, Donner E, Deiana S, Lombi S, Castaldi P, (2017) Use of municipal solid wastes for chemical and microbiological recovery of soils contaminated with metal(loid)s. Soil Biol Biochem 11, 25-35
25. Perruchon C., Chatzinotas A., Omirou M., **Vasileiadis S.,** Menkissoglu-Spiroudi U., Karpouzas D.G., (2017) Isolation of a bacterial consortium able to degrade the fungicide thiabendazole and determination of its metabolic pathway: the key role of a *Sphingomonas* phylotype. Appl Microbiol Biotechnol
26. Perruchon C, Patsioura V, **Vasileiadis S**, Karpouzas DG (2016). Isolation and characterisation of a Sphingomonas strain able to degrade the fungicide ortho-phenylphenol. Pest Manag Sci, 72, 113-124
27. **Vasileiadis S**, Puglisi E, Trevisan M, Scheckel KG, Langdon KA, McLaughlin MJ, Lombi E, Donner E (2015) Changes in soil bacterial communities and diversity in response to long-term silver exposure. FEMS Microbiol Ecol
28. Soldi S, **Vasileiadis S**, Uggeri F, Campanale M, Morelli L, Fogli M, Calanni F, Grimaldi M, A G (2015). Modulation of the gut microbiota composition by rifaximin in non-constipated irritable bowel syndrome patients: a molecular approach. Clin Exp Gastroenterol, 8, 309-325
29. Perruchon C, Papadopoulou ES, Zouborlis S, Batianis C, **Vasileiadis S**, Karpouzas DG (2015) Isolation of a diphenylamine-degrading bacterium and characterization of its metabolic capacities, bioremediation and bioaugmentation potential. Environ Sci Pollut Res, 22, 19485-19496
30. Campos M, Perruchon C, **Vasilieiadis S**, Menkissoglu-Spiroudi U, Karpouzas GD, Diez CM (2015). Isolation and characterization of bacteria from acidic pristine soil environment able to transform iprodione and 3,5-dichloraniline. Int Biodeterior Biodegrad, 104, 201-211
31. Algora C, **Vasileiadis S**, Wasmund K, Trevisan M, Krüger M, Puglisi E, Adrian L (2015). Manganese and iron as structuring parameters of microbial communities in arctic marine sediments from the Baffin Bay. FEMS Microbiol Ecol. doi: 10.1093/femsec/fiv056
32. Karpouzas DG, Kandeler E, Bru D, Friedel I, Auer Y, Kramer S, **Vasileiadis S**, Petric I, Udikovic-Kolic N, Djuric S, Martin-Laurent F (2014). A tiered assessment approach based on standardized methods to estimate the impact of nicosulfuron on the abundance and function of the soil microbial community. Soil Biol Biochem 75, 282-291
33. Suciu NA, Ferrari F, **Vasileiadis S**, Merli A, Capri E, Trevisan M (2013). Pesticides water decontamination in oxygen-limited conditions. J Environ Sci Health, Part B, 48, 793-799
34. Suciu NA, Tiberto F, **Vasileiadis S**, Lamastra L, Trevisan M (2013). Recycled paper-board for food contact materials: Contaminants suspected and migration into foods and food simulant. Food Chem 141, 4146-4151
35. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, van Veen JA, Cocconcelli PS, Trevisan M (2013). Soil

microbial diversity patterns of a lowland spring environment. FEMS Microbiol Ecol, 86, 172-184
36. **Vasileiadis S**, Coppolecchia D, Puglisi E, Balloi A, Mapelli F, Hamon RE, Daffonchio D, Trevisan M (2012). Response of ammonia oxidizing bacteria and archaea to acute zinc stress and different moisture regimes in soil. Microb Ecol, 64: 1028-1037
37. Puglisi E, **Vasileiadis S**, Demiris K, Bassi D, Karpouzas D, Capri E, Cocconcelli P, Trevisan M (2012). Impact of fungicides on the diversity and function of non-target ammonia-oxidizing microorganisms residing in a litter soil cover. Microb Ecol 64, 692-701
38. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, Cocconcelli PS, Trevisan M (2012). Soil bacterial diversity screening using single 16S rRNA gene V regions coupled with multi-million read generating sequencing technologies. PLoS One 7, e42671
39. Puglisi E, Hamon R, **Vasileiadis S**, Coppolecchia D, Trevisan M (2011). Adaptation of soil microorganisms to trace element contamination: a review of mechanisms, methodologies, and consequences for risk assessment and remediation. Crit Rev Environ Sci Technol, 42, 2435-2470
40. Coppolecchia D, Puglisi E, **Vasileiadis S**, Suciu N, Hamon R, Maria Beone G, Trevisan M (2011). Relative sensitivity of different soil biological properties to zinc. Soil Biol Biochem 43, 1798-1807
41. Moszczynska A, **Vasileiadis S**, Zanetti M (2009). Pesticide researchers face formidable challenges: Annual Meeting Report of the Mediterranean Group of Pesticide Research, Piacenza, Italy, 13 and 14 November 2008. TrAC Trends in Analytical Chemistry, 28: 135-140

***[CO] Conference oral presentations (presenter)***

1. **Vasileiadis S,** Perruchon C, Scheer B, Adrian L, Steinbach N, Trevisan M, Plaza-Bolaños P, Agüera A, Chatzinotas A, Karpouzas GD (2020). Nutritional inter-dependencies and a carbazole-dioxygenase are key elements of a Sphingomonas dependent consortium for thiabendazole degradation, Montpellier, France (webinar due to coronavirus pandemic), 6-9 Oct.
2. **Vasileiadis, S**., C. Perruchon, M. Omirou, B. Scheer, L. Adrian, N. Steinbach, A. Agüera, A. Chatzinotas, and D.G. Karpouzas, Roles and interactions of the members of a bacterial consortium along the degradation of the recalcitrant fungicide thiabendazole revealed via multi-omic approach, in Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece". 2019: Patras, Greece.
3. **Vasileiadis, S**, Perruchon, C, Omirou, M, Scheer, B, Adrian, L, Steinbach, N, Chatzinotas, A, Karpouzas, D G (2018). Elucidating the roles and interactions of the members of a bacterial consortium along the degradation of the recalcitrant fungicide thiabendazole via a multi-omic approach. Hellenic Bioinformatics 11, Thessaloniki, Greece, 15 - 18 November.
4. **Vasileiadis, S**, Brunetti, G, Marzouk, E, Wakelin, S, Kowalchuk, G, Lombi, E, Donner, E (2017). Community-wide functional and structural microbial responses to silver in nine soils. MICROBIOKOSMOS: 10 years of Microbial Communities in Action, Athens, Greece, 7-9 April.
5. **Vasileiadis S**, Puglisi E, Trevisan M, Langdon K, McLaughlin M, Lombi E, Donner E (2014). Silver selective pressure on soil microbial communities revealed by high throughput sequencing diversity screening. SETAC Europe, Basel, Switzerland, May 11-15.
6. **Vasileiadis S**, Puglisi E, Trevisan M, Lombi E, Donner E (2013). Shifts in microbial diversity in Australian soils exposed to silver. XXXI ConvegnoNazionale SICA, Napoli, September 16-17.
7. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, Cocconcelli PS, Trevisan M (2012). Bacterial diversity assessment of highly complex soil environments using multi-million read generating sequencing technologies. 4th International Congress EUROSOIL 2012, Soil Science for the Benefit for the Mankind and Environment, Bari, Italy, 02-06 July.
8. **Vasileiadis S**, Balloi A, Mapelli F, Coppolecchia D, Puglisi E, Daffonchio D, Trevisan M, HamonRE (2009). Biochemical and molecular insights in the adaptation of soil microcosms to high zinc concentrations. 19th International Symposium in Environmental Biogeochemistry, Hamburg, Germany, 14-19 September.

***[COC] Conference oral presentations (co-author)***

1. Tsiknia M, Ariannas D, Kakagianni M, Skiada V, **Vasileiadis S**, Karpouzas D, Papadopoulou K, Ehaliotis C (2019). Determinants of intraradical arbuscular mycorrhizal fungi diversity in Greek olive tree cultivars. Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.

2. Doelsch E, Brunetti G, **Vasileiadis S**, Drigo B, Aleer S, Lombi E, Donner E (2019). How do metal pollutant concentration and speciation affect wastewater microbial diversity and antibiotic resistance? International Symposium on the Environmental Dimension of Antibiotic Resistance, Hong Kong, Hong Kong, 2019-06-09 / 2019-06-14.
3. Perruchon C, **Vasileiadis S**, Papadopoulou ES, Chatzinotas A, Omirou M, Gallego-Blanco S, Martin-Laurent F, Karpouzas DG (2017). The degradation of thiabendazole by a proteobacterial consortium: The key role of a Sphingomonas member identified via SIP and meta-omic analysis. 7th International Conference on Pesticide Behaviour in Soils, Water and Air, York, UK, 30th Aug - 1st Sep.
4. Brunetti G, **Vasileiadis S**, Drigo B, Wu X, Saint C, Lombi E, Donner E (2018). Effects of single pulse silver, copper, and zinc selective pressure on wastewater microbial diversity and antibiotic resistance. XENOWAC II 2018, Limassol, Cyprus, 10-12 October.
5. Donner, E, **Vasileiadis, S**, Brunetti, G, Bell, J, Wu, X, Aleer, S, Short, M, Saint, C, Lombi, E, Drigo, B (2018). Microbiome and mobile antibiotic resistome in wastewater treatment plants and recycled wastewater products. ISME 17, Leipzig, Germany, 12-17 August.
6. Pietta E, Gazzola S, **Vasileiadis S**, Montealgre MC, Roh JH, Murray BE, Cocconcelli PS (2014). Phylogenomic analyses and PBP5 progression of Enterococcus faecium strains isolated from food and other sources. ECCO XXXIII - Molecular Taxonomy from biodiversity to biotechnology 33rd Annual Meeting of the European Culture Collections' Organisation, Valencia, Spain, 11-13 June.
7. Gazzola S, **Vasileiadis S**, Cocconcelli PS (2014). Genomic Analysis of the food isolate Staphylococcus epidermidis UC 7032. 2nd International Symposium for Fermented Meat, Valencia, Spain, 20-23 October.
8. **Vasileiadis S**, Arena M, Puglisi E, Cappa F, Cocconcelli PS, Trevisan M (2011). Single hypervariable region usage for 16S rDNA diversity screening of complex soil environments. XXIX Convegno SICA, Foggia, Italy, 21-23 September.
9. Puglisi E, **Vasileiadis S** (2011). High-throughput sequencing approaches to elucidate prokaryotic diversity patterns. International Conference on Soil Omics, Nanjing, China, 19-23 November.
10. Puglisi E, Coppolecchia D, **Vasileiadis S**, Hamon RE, Trevisan M (2011). Structural and functional responses of soil microbial communities to zinc stress as revealed by a combined biochemical and biomolecular approach. ICOBTE (International Conference on Biogeochemistry of Trace Elements), Firenze, Italy, 3-7 July.
11. Puglisi E, **Vasileiadis S**, Cappa F, Cocconcelli PS, Trevisan M (2010). Applicazione di techniche di sequenziamento di nuovagenerazione per analisi metagenomica della biodiversita del suolo. XXIII Convegno SICA, Piacenza, Italy, 20-21 September.
12. **Vasileiadis S**, Balloi A, Mapelli F, Coppolecchia D, Puglisi E, Daffonchio D, Trevisan M, Hamon RE (2010). Short-term responses of ammonia oxidizers to increasing Zn concentrations: a soil microcosm approach. XXVIII Convegno Nazionale della Società Italiana di Chimica Agraria, Piacenza, Italy, 20-21 September.
13. Puglisi E, **Vasileiadis S**, Demiris C, Karpouzas DG, Capri E, Cocconcelli PS, Trevisan M (2010). Nitrifiers report on vineyard litter responses to fungicides. Med. Group of Pesticides Research (MGPR) 2010 Conference, Pesticides in the Mediterranean Area, Catania, 11-12 November.
14. Puglisi E, **Vasileiadis S**, Cappa F, Trevisan M, Cocconcelli PS (2010). Meta-genomic analysis of soil microbial communities in the "fontanili" (low-land springs) environments. Soil Metagenomics 2010, Branschweig, Germany, 8-10 December.
15. Coppolecchia D, Puglisi E, **Vasileiadis S**, Suciu NA, Hamon RE, Trevisan M (2009). Modelli dose-risposta per valutare l'EC50 di attivitábiologiche in unsuolocontaminato con zinco. XXVII Convegno Nazionale della SocietàItaliana di Chimica Agraria, Matera, Italy, 15-18 September.
16. Puglisi E, Coppolecchia D, Balloi A, Mapelli F, Hamon RE, **Vasileiadis S**, Daffonchio D, Trevisan M (2009). Approfondimenti biochimici e molecolari dei mechanism d'attamento del suolo adalte concentrazioni di zinco. XXVII Convegno Nazionale della Società Italiana di Chimica Agraria, Matera, Italy, 15-18 September.
17. Puglisi E, Hamon RE, **Vasileiadis S**, Coppolecchia D, Trevisan M (2009). Adaptation of soil microorganisms to trace element contamination: Mechanisms and consequences for risk assessment. 19th International Symposium in Environmental Biogeochemistry, Hamburg, Germany, 14-19 September.

18. van de Mortel JE, **Vasileiadis S**, Raaijmakers JM (2008). Natural cyclic lipopeptide surfactants: modes of action and effects on plant growth. Xth Meeting of the Working Group: Biological control of fungal and bacterial plant pathogens, Interlaken, Switzerland, 9-12 September.

***[CP] Conference posters***

1. Tsiknia M, Ariannas D, Skiada V, Kakagianni M, **Vasileiadis S**, Karpouzas DG, Papadopoulou KK, Ehaliotis C (2020). Drivers of the biogeographical patterns of the endophytic fungal community in the roots of the Greek olive tree variety Koroneiki. 15th European Conference on Fungal Genetics, Rome, Italy, 17-20/2/2020.
2. Katsoula A, **Vasileiadis S**, Sapountzi M, Karpouzas D (2019). The response of the soil and phyllosphere microbial community to repeated application of the fungicide iprodione: Selection for biodegradation or toxicity? Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.
3. Mitsagga C, Giavasis I, Katsoula A, **Vasileiadis S**, Karpouzas D, Papadopoulou K (2019). Characterization, identification and physiological studies of a pigment-producing tentative Pseudomonas spp. with antifungal properties. Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.
4. Papadopoulou E, Lampronikou E, Mpaxtsebani E, Adamou E, Katsaouni A, **Vasileiadis S**, Nicol G, Menkissolgou-Spiroudi U, Karpouzas D (2019). In vitro evaluation of the inhibitory effect of Quinone Imine the main oxidation derivative of Ethoxyquin on nitrification. Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.
5. Papazlatani C, Perruchon C, Katsoula A, Lagos S, Papadopoulou E, **Vasileiadis S**, Karas P, Karpouzas D (2019). Isolating bacteria able to rapidly degrade fungicides used in fruit packaging industry: Tailored made inocula for the treatment of relevant agro-industrial effluents. Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.
6. Tsiknia M, Ariannas D, Kakagianni M, Skiada V, **Vasileiadis S**, Karpouzas D, Papadopoulou K, Ehaliotis C (2019). Determinants of intraradical arbuscular mycorrhizal fungi diversity in Greek olive tree cultivars. Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece", Patras, Greece, 18-20 April.
7. **Vasileiadis, S**, Perruchon, C, Omirou, M, Steinbach, N, Chatzinotas, A, Karpouzas, D G (2018). Interactomics of the degradation of a recalcitrant pesticide by a soil-enriched bacterial consortium. ISME 17, Leipzig, Germany, 12-17 August.
8. Karpouzas, D G, Perruchon, C, Baguelin, C, Tourna, M, Rousidou, C, **Vasileiadis, S**, Storck, V, Martin-Laurent, F (2018). Functional metagenomic analysis of biobed systems: an invaluable source of genes for the degradation of pesticides. ISME 17, Leipzig, Germany, 12-17 August.
9. Katsoula, A, **Vasileiadis, S**, Karpouzas, D G (2018). Rhizosphere and phyllosphere response to repeated application of the fungicide iprodione: Selection for biodegradation or toxicity? ISME 17, Leipzig, Germany, 12-17 August.
10. Papadopoulou, E S, **Vasileiadis, S**, Karas, P A, Puglisi, E, Trevisan, M, Nicol, G W, Martin-Laurent, F, Menkissoglou-Spiroudi, U, Karpouzas, D G (2018). Ammonia oxidizing microorganisms: optimum candidate biomarkers in the assessment of the soil microbial ecotoxicity of pesticides. SETAC Europe 28th annual meeting, Rome, Italy, 13-17 May.
11. **Vasileiadis S**, Brunetti G, Drigo B, Wu X, Lombi E, Saint C, Donner E (2016). Silver, copper, and zinc induced cross-resistance to antibiotics in a wastewater bacterial community. ANTIMICROBIAL RESISTANCE MEETING finding solutions to a threat on worldwide public health, One Great George Street, London, 24 November.
12. **Vasileiadis S**, Brunetti G, Marzouk E, Wakelin S, Kowalchuk GA, Lombi E, Donner E (2016). High-throughput screening of soil microbial activities and community structure responses to silver stress. 16th International Symposium on Microbial Ecology, Montreal, Canada, 21-26 August.
13. **Vasileiadis S**, Eindhorf T, Wakelin S, Kowalchuk GA, Lombi E, Donner E (2015). Bacterial community shifts and horizontal gene transfer in silver stressed soils. 13th Symposium on Bacterial Genetics and Ecology, Milan, Italy, 14-18 June.
14. Perruchon C, Pantoleon A, Chatzinotas A, Donner E, **Vasileiadis S**, Karpouzas DG (2015). Deciphering the roles of the members of a bacterial consortium in the degradation of thiabendazole:

combining SIP-DGGE with meta-omics. 13th Symposium on Bacterial Genetics and Ecology, Milan, Italy, 14-18 June.

15. Perruchon C, Rousidou K, **Vasileiadis S**, Amoutzias G, Papadopoulou E, Tanou G, Molassiotis A, Karpouzas DG (2014). Isolation and characterization of bacteria able to degrade pesticides used in the fruit-packaging industry. First Global Soil Biodiversity Conference, Dijon, 2-5 December.
16. **Vasileiadis S**, Puglisi E, Trevisan M, Scheckel KG, Langdon K, McLaughlin M, Lombi E, Donner E (2014). High throughput diversity screening reveals selection of soil Bacteria upon long-term silver exposure ISME 15, Seoul, South Korea, 24-29 August.
17. Pappolla A, Ferrarini A, Pertile G, Puglisi E, Suciu NA, Lamastra L, **Vasileiadis S**, Fornasier F, Karpouzas DG, Trevisan M (2014). Assessing the soil microbial toxicity of iprodione using advanced biochemical and molecular tools: Put the blame on the metabolite 3,5dichloroaniline. 13th IUPAC International Congress of Pesticide Chemistry, San Francisco, USA, 10-14 August.
18. Suciu NA, Pappolla A, Ferrarini A, Puglisi E, **Vasileiadis S**, Fornasier F, Sulowicz S, Karpouzas DG, Trevisan M (2014). Are botanical pesticides not toxic to non-target organisms: Studying the effects of azadirachtin on soil microbes using advanced culture-independent approaches. 13th IUPAC International Congress of Pesticide Chemistry, San Francisco, USA, 10-14 August.
19. **Vasileiadis S**, Puglisi E, Trevisan M, Langdon K, McLaughlin M, Lombi E, Donner E (2013). Shifts in microbial communities in response to long-term silver exposure. 2nd Thünen Symposium on Soil Metagenomics, Braunschweig, Germany, 11-13 December.
20. Algora C, **Vasileiadis S**, Wasmund K, Krüger M, Trevisan M, Puglisi E, Adrian L (2013). Microbial diversity in arctic marine sediments along a shelf to basin transect of the Baffin Bay. FEMS 2013 5th Congress of European Microbiologists, Leipzig, Germany, 21-25 July.
21. Perruchon C, **Vasileiadis S**, Puglisi E, Trevisan M, Karpouzas DG (2013). Isolation, characterization and genomic analysis of bacteria rapidly degrading the fungicide 2-phenylphenol. 2013 FEMS 5th Congress of European Microbiologists, Leipzig, Germany, 21-25 July.
22. Schmidt M, **Vasileiadis S**, Puglisi E, Richnow HH, Trevisan M, Nijenhuis I (2013). Microbial communities along a gradient in a pilot-scale wetland subjected to monochlorobenzene contaminated groundwater. 5th FEMS Congress, Leipzig, Germany, 21-25 July.
23. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, Cocconcelli PS, Trevisan M (2012). Assessment of 16S rDNA hypervariable regions for screening bacterial diversity in complex soil environments with multimillion sequence read generating technologies. 28th New Phytologist Symposium, Rhodes, 18-20 May.
24. Arena M, Puglisi E, **Vasileiadis S**, Zanetti M, Spiewak D, Cappa F, Cocconcelli PS, Trevisan M (2011). Bioremediation of phenanthrene contaminated soil by Pseudomonas veronii isolated from an Alps glacier. XXIX Convegno SICA, Foggia, Italy, 21-23 September.
25. **Vasileiadis S**, Arena M, Puglisi E, Cappa F, Trevisan M, Cocconcelli PS (2011). V5 evaluation for single Bacterial 16S rDNA hypervariable region diversity based surveys of highly complex soil environments. Bacterial Genomics and Ecology (BAGECO), Corfu, Greece, 28 May - 2 June.
26. Puglisi E, **Vasileiadis S**, Cappa F, Trevisan M, Cocconcelli PS (2011). Land-use management fingerprint on the soil microbial diversity. Fontanili: a case study. FEMS Conference, Geneve, Switzerland, 26-30 June.
27. **Vasileiadis S**, Balloi A, Mapelli F, Coppolecchia D, Puglisi E, Daffonchio D, Trevisan M, Hamon RE (2010). Acute responses of the soil ammonia oxidizers to zinc. Structures and Processes of the Initial Ecosystem Development, Cottbus, Germany, 20-24 September.
28. **Vasileiadis S**, Puglisi E, Karpouzas DG, Capri E, Cocconcelli PS, Trevisan M (2010). Structural and functional changes in nitrifying microbial communities during the degradation of fungicides in vineyard litter. International Conference on Environmental Pollution and Clean Bio/Phytoremediation, Pisa, Italy, 16-19 June.
29. Puglisi E, **Vasileiadis S**, Coppolecchia D, Hamon RE, Trevisan M (2009). Correlating gene expression and enzymatic activities data: a case study of nitrification assessment in Zinc contaminated soils. FISV Conference, Riva del Garda, Italy, 23-25 September.
30. Coppolecchia D, Puglisi E, **Vasileiadis S**, Suciu NA, Hamon RE, Trevisan M (2009). Dose-reponse models to evaluate ecological doses (EC50) of biological activities in soils spiked with Zinc. Internat. Symp. on Environmental Biogeochemistry (ISEB), Hamburg, Germany, 14-19 Sep.

**Vision, mentors and competences.**

Ever since my master's degree I became very familiar with, and was **fascinated by environmental microorganisms for their central role in ecosystem services**. The immense microbial diversity and its functional redundancy, is housing microbial processes responsible for the mineralization and sequestration of nutrients, the manipulation of plant and animal hormones and hormonal balances, thus contributing to their development, and also the control of microbial plant and animal pathogens. Such processes secure our survival and proliferation through several pathways found in natural and built environments. Even more fascinating is the fact that **current technologies** (e.g. omics) enable us **improve our understanding** of these processes and manipulate them to our wellbeing and benefit. In this context, **I sought to study**: **the dynamic nature of environmental microbial communities** for understanding how interactions have been shaping the presence and activity of these tiny bioreactors throughout the billion years of the planets evolution; **the vastness of the microbial metagenome** for exploring natural novelty related to xenobiotic degradation; **the effects of antibiotic evolutionary/selective pressure** by excessive doses in natural and built environments on the microbial resistance built in response (that may deprive us from recent antibiotic associated advancements like e.g. infection-free operations, which support our long current life-expectancy). Al these axes of **my research depended on tools that define the field of molecular microbial ecology and genomics** supporting my vision as outlined here. **I provide a brief description of study tools I mastered, and mentoring I have received and provided ever since my first contact with research, and which have shaped my associated views.**

Throughout my research career and previous training, I have systematically and progressively been developing my expertise and reputation in the use of molecular biology and omics approaches for microbial ecology. I have gained extensive experience with the use of several laboratory methods, including: standard microbiological culture methods; normal and high throughput enzyme activity analysis approaches; optical and fluorescence microscopy methods; and molecular biology methods from nucleic acids extraction to cloning, PCR-based methods and proteomics. Since the late years of my PhD studies I have been focusing on the culture independent microbial ecology approaches, developing high throughput and cost-effective microbiome analysis methods like the Illumina-based microbiome screening via sequencing of PCR amplified microbial phylogenetic marker fragments. The microbiome analysis has also stimulated my training on necessary for the output analysis bioinformatics and biostatistics tools. In the end and after my PhD studies I was initiated in the world of microbial genomics and transcriptomics, while during my postdoc period I was fascinated and dipped deeper in shotgun meta-genomics/transcriptomics/proteomics/bolomics data analysis in systems biology approaches. Thus far, I have been lucky enough to produce and/or analyze data with representative methodologies of all three sequencing generations (analyzed the 1$^{st}$ gen. Sanger data, the 2$^{nd}$ gen. Illumina, Pyrosequencing and Ion Torrent sequencing data, and the 3$^{rd}$ gen. Nanopore and PacBio sequencing data, I have generated Nanopore sequencing data). All the aforementioned sequence-analysis associated tasks have further expanded and deepened my bioinformatics repertoire, my statistics background, my programming skills (strong knowledge of R and Bash programming and basic knowledge of Perl, Python, Java and c++) and my microbial biochemical and ecological understanding and knowledge.

I had several mentors in different fields of environmental sciences who were and still are considered highly influential global experts in their field. I began my trip in microbial ecology during my MSc thesis carried out in the laboratory of Professor Jos Raaijmakers (current head of the department of the Microbial Ecology at NIOO-KNAW - Netherlands) at the Plant

Pathology department of Wageningen UR where I familiarized with culture-based microbiology approaches, enzymatic assays, microscopy and polymerase chain reaction methods. During my MSc internship, I worked as a Research Assistant with Professor Johan Leveau (currently Professor at UC Davis, CA, USA) where I developed skills in single cell genomics with fluorescent in situ hybridization (FISH), fluorescence microscopy and flow cytometry. In my PhD I familiarized with environmental analytical chemistry under the supervision of Professor Marco Trevisan while in my secondment in the Netherlands Institute of Ecology (NIOO-KNAW) under the supervision of Prof. George A. Kowalchuk (currently Professor at the university of Utrecht), I have familiarized with high throughput sequencing approaches in microbial ecology. Since then, I have set-up methods facilitating fast, cost effective and detailed screening of microbial diversity in multiple environments using high throughput sequencing of microbial phylogenetic and functional marker genes. Since my first PostDoc, Professor Dimitrios G Karpouzas of the Biochemistry and Biotechnology Department of the University of Thessaly (UTh, Larisa, Greece), well reputed in the field of microbial pesticides degradation and environmental enzyme mining, gave me the opportunity to use the skills I developed and carry out bioinformatics analyses on shotgun (meta)genomics/transcriptomics data. This was the beginning of a fruitful collaboration which generated strong ties between me and UTh. During my appointment at FII (formerly CERAR) in Adelaide, UniSA, I collaborated closely with Associate Professor Erica Donner and Professor Enzo Lombi, global experts in state-of-the-art techniques for environmental elemental chemistry (e.g. synchrotron-based X-ray Absorption Spectroscopy). I have incorporated these methods in my own research and was able to gain deeper understanding about selective pressures operating on microbial communities in a range of target environmental matrices (e.g. soil, water, wastewater).

Besides developing my analytical and research skills, I have also devoted a significant amount of time mentoring young researchers via co-supervision and teaching of courses and workshops. I have co-supervised together with the professors in the departments I have performed my post-doctoral research several master and PhD students as my supervisors will happily verify (professor Marco Trevisan – marco.trevisan@unicatt.it -, associate professor Erica Donner – erica.donner@unisa.edu.au -, and professor Dimitrios G Karpouzas – dkarpouzas@uth.gr). I have also taught several workshops on microbial genomics and diversity analysis next to complete courses including laboratories – see relevant CV section.

Despite my lab roaming adventures throughout my career, I have always appreciated all the mentoring I received and kept collaborating with past groups as its apparent through my publication track record and contracted consultancies (e.g. recent publications with Professors Trevisan M, Kowalchuk GA, Donner E, Lombi E and collaborative contracts with Advanced Analytical Technologies, and the UniSA FII). Most importantly, the aforementioned ties with the group of Professor Dimitrios G Karpouzas at UTh resulted in great research, as reflected in the numerous project outputs of my publication list. The most inspiring one being that of a systems biology approach (an MSCA IF fellowship) for the characterization of the rapid degradation (3-4 days) of a recalcitrant compound (thiabendazole; half-life in soil 1-2 years) by a microbial consortium (see preprints; submitted in Microbiome). There we had the opportunity to expand our omics toolbox to more high-end methods like non-target proteomics and metabolomics, while I had the opportunity to expand my computational abilities to fields like chemoinformatics (build-up MS databases of putative metabolites) and biophysics (analysis of protein-ligant interactions). The momentum of our research is reflected on our ability to attract prestigious funding (e.g. we have managed to succeed in the 1$^{st}$ stage of the national ELIDEK funding scheme call).