INES SVILIČIĆ PETRIĆ

Address: Maksimirska cesta 119,
HR-10 000 Zagreb, Croatia

Mobile: +385 98 61 60 60
E-mail: ipetric@irb.hr

Date of birth: March 1, 1978
Place of birth: Zagreb, Croatia
Citizenship: Croatian
Gender: female

1. Education

2009-2010 Postdoctoral research fellowship
Postdoctoral research conducted at the French National Institute for Agricultural Research (INRA) in Dijon (France) in the Laboratory for Soil and Environmental Microbiology (supervised by dr.sc. F. Martin-Laurent)

22nd May 2009 Doctor of science (Ph.D.)
Acquired Ph.D. diploma in microbiology, field of natural science; branch biology
Defended thesis under title: "*Selection and characterization of microbial communities as potential catalysts for biodegradation of polychlorinated biphenyls*" (supervised by dr. Hršak, Ruđer Bošković Institute, Zagreb)

2003-2009 Postgraduate PhD student
Postgraduate student at the University of Zagreb, Faculty of Sciences, Department of Biology – scientific field of natural science – branch biology

8th October 2002. Master (MA) of Science in Ecology
Defended thesis under title "Influence of eutrophication on the development of phytoplankton along the eastern Adriatic coast"

1997-2002 Undergraduate student
Undergraduate student at the University of Zagreb, Faculty of Sciences, Department of Biology - study of Ecology

2. Appointments

Ruđer Bošković Institute (Zagreb), Division for Marine and Environmental Research, Laboratory for environmental microbiology and biotechnology:

from 2012.	Research Associate (permanent position)
2009 – 2011	Senior Research Assistant (postdoctoral position)
2003 – 2009	Research Assistant

3. Professional, research, academic experience and achievements

a. Projects worked on as project leader or collaborator (project, project position, financial values, number of co-workers and outcome)

Project title	**Microbial communities as catalysts in biotransformation processes** (project no. 0098134)
Project position	Collaborator
Financed by	Funded by the Croatian Ministry of Science, Education and Sports (MZOS)
Number of co-workers	-
Project duration	2002-2005
Outcome	My PhD diploma was accomplished as a part of the project 4 publications in peer-reviewed journal Presentations of the results at conferences: "Ecology of Soil Microorganisms" (Prague, Czech Republic); "XII. International Congress of Bacteriology and Applied Microbiology, IUMS" (Istanbul, Turkey); 4th Croatian Congress of Microbiology (Zadar, Croatia); "2nd FEMS congress of european microbiologists" (Madrid, Spain), 1st Central European Forum for Microbiology (Balaton, Hungary); "Third Croatian Congress of Microbiology" (Poreč, Croatia)

Project title	**Assessment of the selected POPs (PCBs, PCDDs/fs, OCPs) in the atmosphere and water ecosystems from the waste materials generated by warfare in former Yugoslavia**
Project position	Collaborator
Financed by	Funded by the fifth framework program (FP5 project)
Number of co-workers	6 Coordinator Recetox - Tocoen Associates, Brno, Czech Republic Partners: Rudjer Boskovic Institute, Zagreb, Croatia; University Of Novi Sad, Novi Sad, Serbia; Institute For Public Health, Maribor, Slovenia; Democritus University Of Thrace Faculty Of Engineering, Xanthi, Greece; Federal Environment Agency – Austria, Vienna, Austria; Geological Survey Sarajevo, Ilidža, BiH
Project duration	2002-2005
Outcome	2 publications in peer-reviewed journal Presentations of the results at conference "EUROSOIL 2012" (Bari, Italy), "VIIIème Congres de la Societe francaise de microbiologie "Carrefour des microbiologies du Nord et du Sud" : résumés" (Marseille, France) Establishment of the national POP inventories

Project title	**Taxonomic, genetic and physiological characterization of bacteria for atrazine degradation**
Project position	Collaborator
Financed by	Bilateral Project COGITO between Croatia and France funded by the Croatian Ministry of Science, Education and Sport
Number of co-workers	1 INRA, Dijon, France
Project duration	2005-2006
Outcome	4 publications in peer-reviewed journal

Project title	**Organic compounds as a molecular tracers of anthropogenic influence in the environment** (project no. 098-0982934-2712)
Project position	Collaborator
Financed by	Funded by the Croatian Ministry of Science, Education and Sports (MZOS)
Number of co-workers	-
Project duration	2007-2013
Outcome	-

Project 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**
Project position	Project leader for Partner 1 (IRB, Zagreb, Croatia)
Financed by	Financed by the European Community within the FP7 through the SEE-ERA-NET PLUS and the International Bureau of the Federal Ministry of Education and Research at the Project Management Agency c/o German Aerospace Center (DLR, Bonn, Germany)
Number of co-workers	4 Coordinator INRA, Dijon, France Partners: Rudjer Boskovic Institute Croatia; University of Thessaly, Greece; UTH, University of Hohenheim Germany; Univ. Novi Sad Serbia
Project duration	2010-2012
Outcome	4 publications in peer reviewed journals Proposition to the International Standardization Organization (ISO) a new work item (NWI 17601) aiming at quantifying the abundance of different microbial groups by qPCR Proposing idea of developing new guidelines for assessing pesticides toxicity on the soil microbes for regulatory purposes - initiative presented to the European Food Safety Agency (EFSA) Oral presentations of the results at conferences: „Pesticides and environment“ (Tours, France); “Pesticide Behaviour in Soils, Water and Air” (York, UK) and „Power of microbes in industry and environment“ (Primošten, Croatia)

Project title	**Identification and characterization of microbial communities showing resistance to the herbicide nicosulfuron**
Project position	Project leader
Financed by	Bilateral project COGITO between Croatia and France funded by the Croatian Ministry of Science, Education and Sport
Number of co-workers	1 INRA, Dijon, France
Project duration	2013-2014
Outcome	1 publication in peer reviewed journals Presentation of the results at the conference “5th Croatian Congress of Microbiology” (Primošten, Croatia)

Project title	**Inter-laboratory evaluation of the ISO standard 11063 "Soil quality - Method to directly extract DNA from soil samples**
Project position	Collaborator
Financed by	Funded by the Welience Agro-environnement-INRA, UMR Plante Microbe Environment, Dijon, France
Number of co-workers	10 laboratories Project leader: INRA, Dijon, France // Welience Agro-

	environnement- INRA, UMR, Dijon, France INERIS (Verneuil-en-Halatte, France); IPL santé (Nancy, France); Swedish University of Agricultural Sciences (Uppsala, Sweden); GSF Munich (Munich, Germany); Julius Kühn-Institut Bundesforschungsinsinstitut für Kulturpflanzen, JKI (Brauschweig, Germany); Universita di Catania, DACPA-Sezione Sciene Agrochimiche (Catania, Italy); CSIC, Estacion Experimental del Zaidin (Grenada, Spain); University of Helsinki (Helsinki, Finland)
Project duration	2009-2010
Outcome	2 publications in peer-reviewed journals Inter-laboratory evaluation i.e. ring-test with 13 laboratories involved was conducted for standardization of the DNA extraction method Proposed method was officially accepted as an ISO standard ISO11063 in September 2010.

Project title	**Bio-tracing Adriatic water masses (BIOTA**)
Project position	Project consultant
Financed by	CSF Installation Research Project
Number of co-workers	4 University of Zagreb, Faculty of Science, Department of Biology Rudjer Boskovic Institute, Croatia, Institute of Marine and Coastal Research, University of Dubrovnik, USRA/NASA Goddard Space Flight Space Center, Institute of Oceanography and Fisheries, Split
Project duration	2014-2017
Outcome	2 publications in peer-reviewed journals 3 conference presentations: 5th Croatian Botanical Symposium (Primošten, Croatia); 6th Croatian Congress of Microbiology Sv Martin na Muri, Croatia); 41st CIESM Congress (Kiel, Germany)

Project title	**Exploring the impact of wastewaters from pharmaceutical industries on the composition and antibiotic resistance profile of exposed microbial communities in freshwater sediments (WINAR)**
Project position	Collaborator (until 2018)
Financed by	CSF Installation Research Project
Number of co-workers	3 Coordinator: Ruđer Bošković Institute, Divison for Marine and Environmental Research, (dr. sc. N. Udiković Kolić) Partners: Faculty of Food Technology and Biotechnology, University of Zagreb, State Laboratory Basel, Biosafety Research, Basel, Switzerland
Project duration	2015-2018
Outcome	1 Scientific papers under review (work still in progress)

Project title	**Comprehensive assessment of the environmental behaviour and fate of pharmaceutically active contaminants: macrolide antibiotics and opioid analgesi** (**COMPASS)**
Project position	Collaborator (until 2018)
Financed by	CSF Research Project
Number of co-workers	Coordinator: Ruđer Bošković Institute, Divison for Marine and Environmental Research (dr.sc. S. Terzić) Partners: Faculty for Food Technology and Biotechnology
Project duration	2015-2018

Outcome	1 publications in peer-reviewed journals

Project title	**Correlation of the environment antibiotic pollution to the development of antibiotic resistance in human pathogens**
Project position	Collaborator
Financed by	Adris
Number of co-workers	Coordinator: Ruđer Bošković Institute, Divison for Marine and Environmental Research (dr. sc. N. Udiković Kolić) Partners: Croatian Institute for Public Health
Project duration	**2017-2019 (active)**

Project title	**Changes in the pathogen composition and immune response during range expansion of successful crayfish invaders (STRIVE)**
Project position	Project consultant
Financed by	CSF Installation Research Project (Dr. sc. S. Hudina)
Number of co-workers	University of Zagreb, Faculty of Science, Department of Biology
Project duration	**2018-2023 (active)**

Project title	**Multiple Stressors in the Aquatic Environment - Understanding the Stress and Receptor Properties (UNDERSTANDOR)**
Project position	Project consultant
Financed by	CSF Research Project (Dr. sc. M. Rožman)
Number of co-workers	Ruđer Bošković Institute, Divison for Marine and Environmental Research
Project duration	**2019-2022 (active)**

Project title	**Exploring the potential of phage and microbiomes to control pathogens in aquaculture (EXAQUA)**
Project position	Project coordinator
Financed by	Bilateral German-Croatian project
Number of co-workers	Ruđer Bošković Institute, Divison for Marine and Environmental Research Helmholtz Centre for Environmental Research GmbH – UFZ, Leipzig, Antonis Chatzinotas
Project duration	**2019-2020 (In evaluation phase)**

b. Research, meeting attendance grants

In 2014 Grant for attending John Innes/Rudjer Bošković Summer School on "Microbial Specialised Metabolites: Origins and Applications" in Dubrovnik (September 13-21, 2014) - grant covered school attendance fee and accommodation cost (cca 750 EUR)

In 2012 FEMS meeting attendance Grant for participating at the conference EUROSOIL 2012, Bari, Italy

In 2011 Joint scholarship Grant funded by French Embassy/Institute Rudjer Boskovic for short-term visit-1month

2009-2010 One year postdoctoral fellowship funded by the Welience Agro-environnement-INRA, UMR Plante Microbe Environment, Dijon (France)
- working on the project "*Inter-laboratory evaluation of the ISO standard 11063 "Soil quality - Method to directly extract DNA from soil samples*"

In 2009 Research Fellowship Grant funded by FEMS (Federation of European Microbiological Societies) for conducting short-term research project - 2 months

- fellowship for the small project "*Taxonomic and functional characterization of PCB-degrading communities enriched from polychlorinated biphenyl polluted soil*")

In 2007 Research Fellowship Grant funded by the French Government and French Embassy for short term stay in France - 3 months
- fellowship for the small project "*Taxonomic and functional characterization of PCB-degrading bacterial communities during small-scale field experiment*"

c. Mentoring experience and collaboration with academia

Mentoring experience

2013-2018 mentoring PhD student Milan Čanković; thesis entitled Molecular characterisation of the prokaryotic community and sulfate-reducing bacteria in hypoxic-anoxic environment of Rogoznica lake was defended by the candidate in July 2018.

- research as a part of the CSF Research Project "The Sulphur and Carbon Dynamics in the Sea- and Fresh-water Environment"(SPHERE) (dr.sc Irena Ciglenečki)
- 2 joint papers written:
  Čanković, M., Petrić, I., Ciglenečki, I., Marguš, M. Spatio-temporal dynamics of sulfate-reducing bacteria in extreme environment of Rogoznica Lake revealed by 16S rRNA analysis // Journal of marine systems, 172 (2017), 14-23
  Čanković, M., Porca, E., Dupčić Radić, I., Janeković, I., Petrić, I., Ciglenečki, I., Collins, G. Microbial diversity and long-term geochemical trends in the euxinic zone of a marine, meromictic lake // Scientific reports (decision: major revision)

Collaboration with academia

Teaching undergraduate course „Environmental Microbiology" at the Postgraduate Interdisciplinary Study in Protection of Nature and Environment at the University of Osijek, Croatia

d. Other evidence on impact and contribution to the field

Functions:

Since 2011 Head of the Environmental Microbiology Section of the Croatian Microbiological Society (http://www.hmd-cms.hr/o-drustvu/sekcije)

Since 2018 Member of "International Network on Microbial Ecotoxicology – EcotoxicoMic"

Member of the evaluation committees for following work of the PhD students Milena Milaković and Petra Kostanjevečki

Member of the Croatian Standards Institute technical committee HZN/TO 147/PO 7

Organization of congresses and symposiums:

Member of the Organizing Committee for the symposium „Power of microbes in industry and environment", sv. Martin na Muri, Croatia, May 2019.

Member of the Programme/Scientific Committee for the congress "The 10th Eastern European Young Water Professionals Conference, Zagreb, Hrvatska, 7-12. svibanj 2018.

Member of the Organizing Committee for the SAME15 – 15th Symposium on Aquatic Microbial Ecology, Zagreb, Croatia, 3-8. September 2017

Member of the Programme/Scientific Committee for the 6th Croatian Congress of Microbiology with International Participation, Sveti Martin na Muri, Croatia, 15-18. June 2016.

Member of the Organizing Committee for the congress „Power of microbes in industry and environment", Primošten, Croatia; 09-12. September 2013.

Function as a reviewer for international scientific journals:

Frontiers, Environmental Science and Pollution Research, Biodegradation, Journal of Hazardous Materials, Bioresource Technology, FEMS Microbiology Ecology, Environmental Science and Pollution Research, International Journal of Molecular Sciences

Other:

- In charge for conducting international ring test (during post-doctoral research at INRA, Dijon (France)) for evaluating method "Soil quality -- Method to directly extract DNA from soil samples" proposed for standardisation to ISO.
  In charge for presenting the results to the official AFNOR (Association Francaise de Normalisation) bodies in Paris, France.
  Proposed method was officially accepted as an ISO11063 in September 2010.
- Part of the international ring test for evaluating method ISO/WD 17601 "Soil quality— Estimation of the abundance of selected microbial gene sequences by quantitative realtime PCR from DNA directly extracted from soil," - accepted as the ISO standard

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ALL REFEREED PUBLICATIONS:

1 Kostanjevecki, P, **Petric, I. (first author, equal contribution**), Loncar, J., Smital T., Ahel M., Terzic S. Biodegradation study of methadone by adapted activated sludge: Elimination kinetics, transformation products and ecotoxicological evaluation // Chemosphere 214 (2018), 719-728

2 Babić, I., Mucko, M., **Petrić, I. (corresponding author),**, Bosak, S., Mihanovic, H., Vilibic, I., Dupcic Radic, I., Cetinic, I., Balestra, C., Casotti, R., Ljubešić, Z. Multilayer approach for characterization of bacterial diversity in a marginal sea: From surface to seabed // Journal of marine systems, 184 (2018), 15-27

3 Žutinić, P., **Sviličić Petrić, I.**, Gottstein, S., Gligora Udovič, M., Kralj Borojević, K., Kamberović, J., Kolda, A., Plenković-Moraj, A., Ternjej, I. Microbial mats as shelter microhabitat for amphipods in an intermittent karstic spring // Knowledge and Management of Aquatic Ecosystems, 1 (2018), 419

4 Babić, I., **Petrić, I. (corresponding author),** Bosak, S., Mihanović, H., Dupčić Radić, I., Ljubešić, Z. Distribution and diversity of marine picocyanobacteria community: Targeting of Prochlorococcus ecotypes in winter conditions (southern Adriatic Sea) // Marine Genomics. 17 (2017), 3-11

5 Čanković, Milan, **Petrić, I. (corresponding author)**, Ciglenečki, Irena, Marguš, Marija. Spatio-temporal dynamics of sulfate-reducing bacteria in extreme environment of Rogoznica Lake revealed by 16S rRNA analysis // Journal of marine systems, 172 (2017), 14-23

6 **Petrić, I.,** Karpouzas, D., Bru, D., Udiković-Kolić, N., Kandeler, E., Djurić, S., Martin-Laurent, F. Nicosulfuron application in agricultural soils drives the selection towards NS-tolerant microorganisms harboring various levels of sensitivity to nicosulfuron // Environmental science and pollution research international. 23 (2016), 5, 4320-4333; prvi autor

7 Stipičević, S., Galzina, N., Udiković-Kolić, N., Jurina, T., Mendaš, G., Dvoršćak, M., **Petrić, I.**, Barić, K., Drevenkar, V. Distribution of terbuthylazine and atrazine residues in crop-cultivated soil: The effect of herbicide application rate on herbicide persistence // Geoderma. 259/260 (2015)

8 Karpouzas, D., Kandeler, E., Bru, D., Friedel, I., Auer, Y., Kramer, S., Vasileiadis, S., **Petrić, I.,** Udiković-Kolić, N., Djurić, S., Martin-Laurent, F. 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 biology & biochemistry. 75 (2014), 282-291

9 Karpouzas, D., Papadopoulou, E., Ipsilantis, I., Friedel, I., **Petrić, I.,** Udiković-Kolić, N., Djurić, S., Kandeler, E., Menkissoglu-Spiroudi, U., Martin-Laurent, F. Effects of nicosulfuron on the abundance and diversity of arbuscular mycorrhizal fungi used as indicators of pesticide soil microbial toxicity // Ecological indicators. 39 (2014) , 44-53

10 **Petrić, I.,** Bru, D., Udiković-Kolić, N., Hršak, D., Philippot, L., Martin-Laurent, F. Evidence for shifts in the structure and abundance of the microbial community in a long-term PCB-contaminated soil under bioremediation // Journal of hazardous materials. 195 (2011) , 254-260

11 Udiković-Kolić, N., Devers-Lamrani, M., **Petrić, I.**, Hršak, D., Martin-Laurent, F. Evidence for taxonomic and functional drift of an atrazine-degrading culture in response to high atrazine input. // Applied microbiology and biotechnology. 90 (2011) , 4, 1547-1554

12 **Petrić, I.,** Philippot, L., Abbate, C., Bispo, A., Chesnot, T., Hallin, S., Laval, K., Lebeau, T., Lemanceau, P., Leyval, C., Lindström, K., Pandard, P., Romero, E., Sarr, A., Schloter, M., Simonet, P., Smalla, K., Wilke, B.M., Martin-Laurent, F. Inter-laboratory evaluation of the ISO standard 11063 "Soil quality - Method to directly extract DNA from soil samples" // Journal of microbiological methods. 84 (2011) , 3, 454-460

13 **Petrić, I.,** Hršak, D., Fingler, S., Udiković-Kolić, N., Bru, D., Martin-Laurent, F. Insight in the PCB-degrading functional community in long-term contaminated soil under bioremediation. // Journal of soils and sediments. 11 (2011) , 2, 290-300

14 Bošnjak, M., Udiković Kolić, N., **Petrić, I.**, Cihlar, D., Hršak, D. Integrated approach to mathematical modeling of atrazine degradation in different reaction systems. // Food technology and biotechnology. 47 (2010) , 392-403

15 Udiković-Kolić, N., Hršak, D., Devers, M., Klepac-Ceraj, V., **Petrić, I.,** Martin-Laurent, F. Taxonomic and functional diversity of atrazine-degrading bacterial communities enriched from agrochemical factory soil. // Journal of applied microbiology. 109 (2010) , 1, 355-367

16 Udiković Kolić, N., Martin-Laurent, F., Devers, M., **Petrić, I**., Begonja Kolar, A., Hršak, D. Genetic potential, diversity and activity of an atrazine-degrading community enriched from a herbicide factory effluent. // Journal of Applied Microbiology. 105 (2008), 5, 1334-1343

17 Udiković Kolić, N., Hršak, D., Begonja Kolar, A., **Petrić, I.,** Stipičević, S., Soulas, G., Martin-Laurent, F. Combined metabolic activity within an atrazine-mineralizing community enriched from agrochemical factory soil. // International Biodeterioration and Biodegradation. 60 (4) (2007), 299-307

18 Begonja Kolar, A., Hršak, D., Fingler, S., Ćetković, H., **Petrić, I.,** Udiković Kolić, N. PCB-degrading potential of aerobic bacteria enriched from marine sediments. // International Biodeterioration and Biodegradation. 60 (2007), 1, 16-24

19 **Petrić, I.,** Hršak, D., Fingler, S., Vončina, E., Ćetković, H., Begonja Kolar, A., Udiković Kolić, N. Enrichment and characterization of PCB-degrading bacteria as potential seed cultures for bioremediation of contaminated soil. // Food Technology and Biotechnology. 45 (2007), 1, 11-20

Other papers:

20 Philippot, L., Abbate, C., Bispo, A., Chesnot, T., Hallin, S., Lemanceau, P., Lindström, K., Pandard, P., Romero, E., Schloter, M., Simonet, P., Smalla, K., Wilke, B., Petrić, I., Martin- Laurent, F. Soil microbial diversity : an ISO standard for soil DNA extraction. // Journal of soils and sediments. 10 (2011) , 7, 1344-1345 // short announcement

21 Martin-Laurent, F., Kandeler, E., Petrić, I., Djurić, S., Karpouzas, D. G. ECOFUN-MICROBIODIV : an FP7 European project for developing and evaluating innovative tools for assessing the impact of pesticides on soil functional microbial diversity—towards new pesticide registration regulation? // Environmental science and pollution research international. 20 (2013), 2, 1203-1205 // project highlights

Current papers under review:

1. Čanković, M., Porca, E., Dupčić Radić, I., Janeković, I., **Petrić, I**., Ciglenečki, I., Collins, G. Microbial diversity and long-term geochemical trends in the euxinic zone of a marine, meromictic lake // Scientific reports (decision: major revision)

2. Milaković, M., Vestergaard, G., González-Plaza, J.J., **Petrić, I:,** Šimatović, A., Senta, I:, Kublik, S., Schloter, M., Smalla, K:,Udiković-Kolić, N. Pollution from azithromycin-manufacturing promotes macrolide-resistance gene propagation and induces spatial and seasonal community shifts in receiving river sediments // Environmental International (decision: minor revision)
3. Kolda, A., **Petrić, I (corresponding author)**, Mucko, M., Gottstein, S., Žutinić, P., Goreta, G., Ternjej, I., Rubinić, J:, Radišić, M., Gligora Udovič, M How environment selects: resilience and survival of microbial mat community within intermittent karst spring Krčić (Croatia) // Ecohydrology (under review)