

## PERSONAL INFORMATION



📍 Faculty of Biology, University of Plovdiv "Paisii Hilendarski", Tsar Assen St. No.24, 4000 Plovdiv, Bulgaria

☎ +359 32 261 486 📠 +359898 548 258

✉ [iziliev@uni-plovdiv.bg](mailto:iziliev@uni-plovdiv.bg) or [iziliev79@gmail.com](mailto:iziliev79@gmail.com)



**Research interests:** Environmental biotechnology, Bioremediation, Metagenomics, Prokaryotic quantitative and qualitative composition in surface water, soils and sediments, Biostatistics, Relationship between the cumulative effect of nutrient loading, metabolic activity and microbial community biodiversity, Development of approaches and adaptation of microbiological metrics to assess ecological potential of surface waters, Screening and expression analysis of virulence factors of microbial isolates.

## POSITION HELD AND RESEARCH FIELD

### Associate Professor in Biotechnology

## WORK EXPERIENCE

31.05.2023 – at present

#### Associate Professor in Biotechnology

Department of Biochemistry and Microbiology, Faculty of Biology, University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

- Lectures and exercises in the Bachelor and Master courses
- Participation in research projects
- Scientific supervision of graduates

01.07.2015 – 30.05.2023

#### Chief Assistant Professor in Microbiology

Department of Biochemistry and Microbiology, Faculty of Biology, University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

**Lecturer in:** Biotechnology of renewable energy sources, Soil Microbiology, Water Microbiology  
**Laboratory Exercises in:** Microbiology, Microbial Ecology, Bioremediation, Microbial Metabolism

17.02.2011– 30.06.2015

#### Assistant Professor in Microbiology

Department of Biochemistry and Microbiology, Faculty of Biology, University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

**Laboratory Exercises in:** Microbiology, Microbial Ecology, Bioremediation

01.08.2009 – 16.02.2011

#### Chief Assistant Professor in Aquaculture

Department of Aquaculture, Institute of Fisheries and Aquaculture, Plovdiv BG-4003 Plovdiv, Bulgaria.

**Team member:**

- Analysis of basic physicochemical and microbiological parameters of the hydroecosystem of economically significant heavily modified water bodies and collection of up-to-date data ensuring the sustainable aquaculture

01.08.2006– 31.07.2009

#### Senior Researcher

Department of Aquaculture, Institute of Fisheries and Aquaculture, Plovdiv BG-4003 Plovdiv, Bulgaria.

**Team member:**

- Biodiversity assessment of the astacifauna and ichthyofauna of surface water bodies.
- Development and application of technologies for reproduction of some fish species subject to aquaculture

## EDUCATION AND TRAINING

12.09.2018 – 12.03.2019

#### POSTDOCTORAL FELLOW

University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

Funded by the National Scientific Program for Young Scientists and Postdoctoral Fellows, Bulgarian

Ministry of Education and Science

09.02.2015 **DOCTORAL (PhD) DEGREE**

Diploma No. 1000135, University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

Subject: Microbiological and hydrobiological status in the net-cage aquaculture area in Kardzhali reservoir, Bulgaria

01.10.1996 – 27.07.2001 **UNIVERSITY DEGREE**

Faculty of Biology, University of Plovdiv "Paisii Hilendarski", BG-4000 Plovdiv, Bulgaria.

**BSc and MSc in Biology.** Major: Biology; Specialization; Plant Biotechnology

Diploma No. 2251-B/ August 2001, Faculty of Biology, University of Plovdiv "Paisii Hilendarski", BG-4000, Plovdiv, Bulgaria.

15.09.1993 – 31.05.1996 **SECONDARY EDUCATION**

St. St. „Cyril and Methodius“, BG-4230, Asenovgrad, Bulgaria

Biology and Chemistry

**PERSONAL SKILLS**

Mother tongue(s) Bulgarian

Other language(s)

|         | UNDERSTANDING |         | SPEAKING           |                   | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
|         | Listening     | Reading | Spoken interaction | Spoken production |         |
| English | C1            | C1      | C1                 | C1                | C1      |
| Russian | B2            | B2      | A2                 | A2                | A2      |

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

**Communication skills**

- Excellent written and verbal communication skills gained through my experience as an assistant professor
- Ability to provide and contribute expertise when working in team environment

**Job-related skills**

- Extensive experience in project proposal planning, budgeting, goal setting, and scheduling
- Coordination of activities as team member and team leader
- Performance of tasks at the time acquired during participation in a number of projects related to environmental management

**Lab skills:**

- Bacteria isolation and cultivation
- Microscopy
- Working with various systems for microbial identification (e.g., Biolog, MERLIN, Vitec etc.)
- DNA and RNA extraction and purification
- PCR techniques
- Gene expression analysis
- DNA and protein electrophoresis (SDS-PAGE and agarose)
- Membrane filtration systems
- Water sampling with specialized equipment (e.g., MICROS Water Sampler)

ORCID: <https://orcid.org/0000-0002-2381-3165>

Scopus Author ID: 35226439900

Web of Science ResearcherID: GOE-7004-2022

Research Gate: <https://www.researchgate.net/profile/Ivan-Iliev-4>

h-index (2021): 8

**Computer skills**

- good command of office applications (word, presentation software)
- good command of statistical software such as Statistica (StatSoft), SPSS (IBM Analytical)
- good command of software for multivariate analysis for ecology (Primer 6, etc.)

#### OTHER SCILLS

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##### Editor

Journal of BioScience and Biotechnology (<http://www.jbb.uni-plovdiv.bg>)  
Faculty of Biology, University of Plovdiv "Paisii Hilendarski"  
online ISSN: 1314-6246

Ecologia Balkanica (<https://eb.bio.uni-plovdiv.bg>)  
Faculty of Biology, University of Plovdiv "Paisii Hilendarski"  
online ISSN: 1313-9940

#### ADDITIONAL INFORMATION

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##### LIST OF PUBLICATIONS:

1. Petrova, S., Velcheva, I., Nikolov, B.,...**Iliev I.** (2022). Nature-based solutions for the sustainable management of urban soils and quality of life improvements. *Land*, 11(4): 569
2. **Iliev, I.**, Apostolova, E., Hadjieva, N. *et al.* (2021). Bacterial diversity and physiological activity of lettuce (*Lactuca sativa*) rhizosphere under bio-organic greenhouse management strategies. *International Journal of Environmental Science and Technology*, <https://doi.org/10.1007/s13762-021-03831-z>
3. **Iliev, I.**, Kostadinova, S., Tsankova, M., Marhova, M. (2020). Microbial Physiological Diversity Assessment in Protected Wetlands: A Case Study in Maritza River Basin, South Bulgaria. *Ecologia Balkanica*, 12(2): 97-110.
4. Tsankova, M., Marhova, M., Kostadinova, S., **Iliev, I.** (2020). Antifungal susceptibility and virulence factors of *Candida* spp. isolated from the genital tract of outpatients. *Journal of BioScience and Biotechnology*, 9(2): 13-17
5. **Iliev, I.**, Dochin, K., Marhova, M., Ivanova, A., Kostadinova, S. (2019). Association Between the Environmental Parameters and Biological Indicators in Reservoirs with Intensive Net-Cage Aquaculture: A Case Study in Kardzhali Reservoir, Bulgaria. *Ecologia Balkanica*, 11(2): 229-241.
6. **Iliev, I.**, Marhova, M., Kostadinova, S., Gochev, V., Tsankova, M., Ivanova, I., Yahubyan, G., Baev, V. (2019). Metagenomic analysis of the microbial community structure in protected wetlands in the Maritza River Basin. *Biotechnology and Biotechnological Equipment*, 33(1): 1721-1723.
7. Dochin, K., **Iliev, I.** (2019). Functional classification of phytoplankton in Kardzhali Reservoir (Southeast Bulgaria). *Bulgarian Journal of Agricultural Science*, 25(2):385-395
8. Stefanov, Y., **Iliev, I.**, Marhova, M., Kostadinova, S. (2019). Production of Extracellular Phospholipase C by Species of Genus Bacillus with Potential for Bioremediation. *Ecologia Balkanica*, 11(2): 279-290.
9. Tsankova, M., Marhova, M., Kostadinova, S., **Iliev, I.** (2019). Antimicrobial susceptibility and biofilm-forming ability of *Enterococcus faecalis* strains isolated from the urogenital tract of outpatients. *Journal of BioScience and Biotechnology*, 8(2): 99-104
10. Marhova, M., Tsankova, M., Kostadinova, S., **Iliev I.** (2018). Microbial Community Structure and its Biofilm Forming Capacity in Wetland Soils, Southern Bulgaria. *Ecologia Balcanica*, 10(2): 173-184.
11. Dochin, K., Ivanova, A., **Iliev, I.** (2018). Current state of phytoplankton in Batak reservoir (Southwestern Bulgaria). *Bulgarian Journal of Agricultural Science*, 24(4):686-697
12. Petrova, S., B. Nikolov, I., Velcheva, M., ... **Iliev, I.** (2018). Dynamics of soil properties under a pollution gradient in urban areas (Plovdiv, Bulgaria). *Scientific Papers. Series A. Agronomy*, 61(1): 109-116.

13. Terziyski, D., Beshkova, M., Kalchev, R., Kalcheva, H., **Iliev, I.** (2018). The water column transparency, total phosphorus, chlorophyll-a and their relationships in freshwater reservoirs with and without *Dreissena* spp (Molluska: Bivalvia). *Acta Zoologica Bulgarica*: 70 (3): 389-395.
14. Dochin, K., Ivanova, A., **Iliev, I.** (2017). The phytoplankton of Koprinka Reservoir (Central Bulgaria): species composition and dynamics. *Journal of BioScience and Biotechnology*, 6(1): 73-82
15. Dochin, K., Kuneva, V., **Iliev, I.** (2017). Principal component analysis of the phytoplankton interactions with the environmental factors in two reservoirs in Bulgaria. *Bulgarian Journal of Agricultural Science*, 23(6):1037-1046
16. **Iliev, I.**, Yahubyan, G., Marhova, M., Apostolova, E., Gozmanova, M., et al. (2017). Metagenomic profiling of the microbial freshwater communities in two Bulgarian reservoirs. *Journal of Basic Microbiology*, 57(8): 669-679.
17. Hristova, Y., Wanner, J., Jirovets, L., Stappen, I., **Iliev, I.**, Gochev, V., (2015). Chemical composition and antifungal activity of essential oil of *Hyssopus officinalis* L. from Bulgaria against clinical isolates of *Candida* species. *Biotechnology and Biotechnological Equipment*, 29(3): 592-601.
18. **Iliev, I.**, Marhova, M., Gochev, V., Tsankova, M., Trifinova, S. (2015). Antibiotic resistance of gram-negative benthic bacteria isolated from the sediments of Kardzhaly Dam, Bulgaria. *Biotechnology and Biotechnological Equipment*, 29 (2): 274-280.
19. **Iliev, I.**, Kostadinova, S., Marhova, M., Hubenova, T., Zaikov, A., (2015). Microbial status of Dospat Dam Lake, Bulgaria. *Bulgarian Journal of Agricultural Science*, 21: 33-39.
20. Kirova, G., Velkova, Z., Stoytcheva, M., Hristova, Y., **Iliev, I.** Gochev, V., (2015). Biosorption of Pb(II) ions from aqueous solutions by waste biomass of *Streptomyces fradiae* pretreated with NaOH. *Biotechnology and Biotechnological Equipment*, 29(4): 689-695.
21. Popova, V., Gochev, V., Girova, T., **Iliev, I.**, Ivanova, T., Stoyanova, A., (2015). Extraction products from tobacco – aroma and bioactive compounds and activities. *Current Bioactive Compounds*, 11(1): 31-37.
22. Terziyski, D., Tzavkova, V., Kalchev, R., **Iliev, I.**, (2015). Impact of the fish cage aquaculture on the zooplankton community in „Kardzhali“ Dam lake, Bulgaria. *Bulgarian Journal of Agricultural Science*, 21: 45-55.
23. Hubenova, T., **Iliev, I.**, **Zaikov, A.**, (2014). Reproductive biology of the channel catfish (*Ictalurus punctatus* Raf.) reared in heated water. *Bulgarian Journal of Agricultural Science*, 20(4): 957-961.
24. **Iliev, I.**, Hadjinikolova, L. (2013). Seasonal and vertical variations of water temperature and the amount of dissolved oxygen in Kardjali reservoir, Bulgaria. *J Agric Sci Tech.*, 5(2): 212-215.
25. Hubenova, T., Zaikov, A., Piskov, I., **Iliev, I.** (2012). Meat yield of stone crayfish *Austropotamobius torrentium* (Schrank, 1803). *Agric Sci Technol*, 4(1):41–44
26. Todorov, O., **Iliev, I.** (2012). Trifonova S. Study on the Total Coliforms Count and Coli Titter in the Waters of Kardzhaly Reservoir, Bulgaria. *Ecologia Balkanica*, 4(2): 15-23
27. Zaikov, A., Hubenova, T., **Iliev, I.**, Piskov, I. (2011). Study on the narrow-clawed crayfish *Astacus leptodactylus* Eschscholtz, 1823 (Crustacea: Decapoda: Astacidae) population in a sand-pit Lake near the village of Boshulya (Upper Thracian Lowland, Bulgaria). *Zoonotes*, 17: 1-4
28. Zaikov, A., Hubenova, T., **Iliev, I.**, Vasileva, P., Piskov, I. (2011). Study on the Stone crayfish *Austropotamobius torrentium* (Schrank, 1803) (Crustacea: Decapoda: Astacidae) population in the Dospat Dam (Western Rhodope Mountains, Bulgaria). *Zoonotes*, 18: 1-5.
29. Zaikov, A., Hubenova, T., **Iliev, I.**, Vasileva, P., Piskov I. (2010). Investigation on stone crayfish *Austropotamobius torrentium* (Schrank, 1803) population in River Sarnena (Western Rhodope Mountains, Bulgaria). *ZooNotes*, 10: 1-4.
30. Zaikov, A., Piskov, I., **Iliev, I.**, (2010). Investigation on shelter competition between narrow-clawed crayfish *Astacus leptodactylus* (Esch.) and noble crayfish *Astacus astacus* L. *Bulgarian Journal of Agricultural Science*, 16(3): 369-375.
31. Zaikov, A., Hubenova, T., **Iliev, I.**, Piskov, I. (2010). Investigation on noble crayfish *Astacus astacus* (Linnaeus, 1758) population in River Razhdavets (Balkan Mountain, Bulgaria). *ZooNotes*, 12: 1–4.

32. Terziyski, D., Kalchev, R., Vasileva, P., Piskov, I., **Iliev, I.** (2009). Fish abundance differences and relations to plankton primary production in two variants of pond stocking with common carp (*Cyprinus carpio* L.), grass carp (*Ctenopharyngodon idella* val.) and bighead carp (*Aristichthys nobilis* Rich.) larvae. *AAFL Bioflux*, 2(3): 251-260.
33. Stefanova, E., Uzunova, E., Hubenova, T., Vasileva, P., Terziyski, D., **Iliev, I.** (2008). Age and growth of the chub, *Leuciscus cephalus* L. from the Maritza river (South Bulgaria). *Bulgarian Journal of Agricultural Science*, 14(2): 214-220.
34. Zaikov, A., Hubenova, T., **Iliev, I.** (2008). Prey Selectivity in One Summer Old Pike (*Esox lucius* L.). *Bulgarian Journal of Agricultural Science*, 12,2:195-202.
35. Zaikov, A., Hubenova, T., Iliev, I. (2008). Prey selectivity in one-summer-old wels (*Silurus glanis* L) fed with carp (*Cyprinus carpio*) and topmouth gudgeon (*Pseudorasbora parva*). *Bulgarian Journal of Agricultural Science*, 14(2): 238-242.
36. Zaikov, A., Hubenova, T., **Iliev I.**, Vasileva, P. (2008). Body length and body weight ratio characteristics of one-summer - old wels (*Silurus Glanis* L.). *Bulgarian Journal of Agricultural Science*, 14(2): 176-181.
37. Zaikov, A., **Iliev, I.**, Hubenova, T. (2008). Induction and recovery from anaesthesia in pike (*Esox Lucius* L.) exposed to clove oil. *Bulgarian Journal of Agricultural Science*, 14(2): 165-170.
38. Zaikov, A., **Iliev, I.**, Hubenova, T. (2008). Investigation on growth rate and food conversion ratio of wels (*Silurus glanis* L.) in controlled conditions. *Bulgarian Journal of Agricultural Science*, 14(2): 171-175.

#### LIST OF PROJECTS:

1. **J-165/21.07.2021.** "Determining the ecological potential of different types of dams in Bulgaria and proposing methodologies for biological control with commercial fish species to regulate eutrophication processes", funded by the Agricultural Academy, Bulgaria. Client: Institute of Fisheries and Aquaculture. Positions held: **Key expert - Microbiology**
2. **Technical proposal No. 261388, eC2:** Validation of the typology and classification system in Bulgaria for assessment the ecological status of surface water bodies of categories "river", "lake and "transitional waters. **Contracting Authority: World Bank; Period of implementation: April 2020 - May 2021**, Positions held: **Key expert - Microbiology**
3. **FP19-BF-013/ 22.04.2019.** "Living water, air and health with transplants (LIFE)". Client: University of Plovdiv "Paisii Hilendarskii". Positions held: **Microbiology Expert**
4. **D-33-49/10.12.2019.** „Determination of the ecological capacity of the complex and economically significant reservoirs, included in Annex 1 of the Water Act (excluding those for drinking water supply) for freshwater fish farming, according to the methodology developed under the FISHFARMING project", funded by the Ministry of Environment and Water. Client: Institute of Fisheries and Aquaculture, Bulgaria. Positions held: **Key expert - Microbiology**
5. **Contract No. 6/12.09.2018.** „Pilot adaptation of the ecological potential assessment system for reservoirs". Client: East Aegean River Basin Directorate, Bulgaria; Positions held: **Microbiology Expert**
6. **KP-06-OPR 03/12/18.12.2018.** "Model for sustainable management of urban soils by building buffer green areas around transport arteries to improve quality of life", Funded by the "Scientific research fund", Ministry of Education and Science, Bulgaria.. Client: University of Plovdiv "Paisii Hilendarskii", Bulgaria. Positions held: **Microbiology Expert**
7. **Project No.15-18/2018.** „Growing lettuce in unheated greenhouses and outdoors under conditions of transition to organic production". Client: Agricultural University, Bulgaria. Positions held: **Microbiology Expert**
8. **MU17-BF-022/14.03.2017.** "Development of a model for assessment of ecological status of urbanized landscapes". Client: University of Plovdiv "Paisii Hilendarskii", Bulgaria. Positions held: **Microbiology Expert**
9. **FP17-BF-001/14.03.2017.** "Assessment of the anthropogenic stress on wetlands in southern Bulgaria". Client: University of Plovdiv "Paisii Hilendarskii", Bulgaria. Positions held: **Microbiology Expert**
10. **J-123/25.04.2016.** "Water quality assessment of Kardzhali reservoir in connection with the development of sustainable aquaculture" Client: Agricultural Academy, Bulgaria. Positions held: **Microbiology Expert**
11. **BG02-0008/27.04.2015.** "Performance of investigative monitoring program for assessment of pressure and impact of fish farming activities on surface water bodies and actualization of program of measures in the RBMP of East Aegean River Basin District (FISHFARMING)". Project promoter: East Aegean river basin directorate with center Plovdiv, Funded by: EEA GRANTS; Positions held: **Microbiology Expert**

12. NI15-BF-003/19.04.2015 “Integrated biological approaches for monitoring of priority substances in the water”. Client: University of Plovdiv “Paisii Hilendarskii”, Bulgaria. Positions held: **Microbiology Expert**
13. **BG02HWR32002/ 2015**. “Assessment of the water quality and the ichthyofauna and crayfish diversity and the relevant microbiological indicators in the Dospat Reservoir and the River Dospatska and elaboration of a program for water quality monitoring in the studied reservoirs and a program for preservation and restoration of the biodiversity of ichthyofauna and the crayfish population in the Dospat Reservoir and River Dospatska”, funded by Programme Rural Development 2014-2020 through EU Structural Funds. Client: Municipality Dospat; Positions held: **Microbiology Expert**
14. **DO 02-307/19.12.2008**. “Complex analysis and assessment of the impact of net-cage aquaculture on the hydro-ecosystem of reservoirs in Bulgaria” Funded by the “Scientific research”, Ministry of Education and Science, Bulgaria. Client: Institute of Fisheries and Aquaculture, Agricultural Academy, Bulgaria. Positions held: **Microbiology Expert**
15. **NI13-BF-004/2013**. по ФНИ при ПУ „Plant biologically active substances and their potential applications in biotechnology for health“. Client: University of Plovdiv “Paisii Hilendarskii”, Bulgaria. Positions held: Microbiology Expert
16. Targeted project: “Development of a system of rules for good production practice in aquaculture”, funded by the Agricultural Academy, Bulgaria. Client: Institute of Fisheries and Aquaculture, Bulgaria