

PERSONAL INFORMATION



BALAN Ludmila,
PhD in biological sciences, associate researcher

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Sex F | Date of birth 06/08/1985 | Nationality Moldavian

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Scopus Author ID: 58642923900

WoS ResearcherID: PKG-3556-2026

Google Scholar:

https://scholar.google.com/citations?hl=ru&user=1Hc_PB8AAAAJ&view_op=list_works

IBN: https://ibn.idsi.md/ro/author_articles/18705

JOB APPLIED FOR POSITION PREFERRED JOB STUDIES APPLIED FOR

Technical University of Moldova, Institute of Microbiology and Biotechnology

Microbiology, biotechnology

WORK EXPERIENCE

01.2023 – present	Scientific research coordinator Institute of Microbiology and Biotechnology of Technical University of Moldova, bd. Ștefan cel Mare, 168, Chishinau, Moldova, MD-2004, www.imb.utm.md ▪ The development of microbial preparations with high-performing biological properties, for use in agriculture, the obtaining of antimicrobial preparations, the development of innovative biotechnological processes for agriculture, environmental protection and the testing of microbial preparations as stimulators of plant productivity. Research
02.2019 – 12.2022	Scientific research coordinator Institute of Microbiology and Biotechnology, 1 Academiei street, Chishinau, Moldova, MD-2028, www.imb.asm.md ▪ Development of procedures for the preservation of microorganisms, study of the action of nanoparticles on the growth and development of microorganisms, isolation in pure culture of different groups of microorganisms from reservoirs, preservation of microorganisms. Research
01.2015 – 01.2019	Scientific research senior Institute of Microbiology and Biotechnology, 1 Academiei street, Chishinau, Moldova, MD-2028, www.imb.asm.md ▪ Elaboration of procedures for the preservation of microorganisms, study of the action of nanoparticles on the growth and development of microorganisms Research
01.2013 – 10.2014	Scientific research senior

	University of Academy of Sciences of Moldova, 3/2 Academiei street, Chishinau, R. Moldova, www.edu.asm.md ▪ The enzyme activity in sunflower under the influence of the <i>O. cumana</i> parasite determination, developing the optical configuration concept and the software based on LabVIEW for the application of the digital holographic microscope in the study of biological preparations Research
01.2011 – 12.2014	Scientific research Institute of Microbiology and Biotechnology, 1 Academiei street, Chishinau, Moldova, MD-2028, www.imb.asm.md ▪ Establishing the mechanisms for changing the oxidative status of microalgae under the action of metallocomplexes in order to obtain antioxidant preparations. Research
01.2011 – 08.2011	Scientific research probationer State University of Moldova, 60 Mateevici A. street, Chishinau, Moldova, www.usm.md ▪ The development of technologies for obtaining antioxidant preparations of natural origin and the study of the cultivation conditions and accumulation by spirulina of bioactive substances with an antioxidant effect (phycobiliproteins and SOD) Research
11.2007 – 11.2010	PhD student Institute of Microbiology and Biotechnology, 1 Academiei street, Chishinau, Moldova, MD-2028, www.imb.asm.md ▪ Study of the action of coordinating compounds of copper on the productivity and biochemical composition of the cyanobacterium <i>Spirulina platensis</i> Research
08.2007 – 10.2007	Senior laboratory assistant Agrarian State University of Moldova, 42 Mirceshti street, Chishinau, R. Moldova, www.uasm.md ▪ Students guiding in the education process when performing laboratory work in the Faculty of Agronomy Education

EDUCATION AND TRAINING

01 November 2016

Research Lecturer

Scrieți nivelul EQF, dacă îl cunoașteți

specialty Cell Biology (Certificate CC Series No.0568 issued by CNAA on 01.11.2016, no. 0239)

29 July 2013

PhD in biological sciences

Scrieți nivelul EQF, dacă îl cunoașteți

(Diploma of Doctor of Science Series DR No. 1687, issued by CNAA on 29.07.2013, no. 0737) PhD thesis "Productivity and biochemical composition of the cyanobacterium *Spirulina platensis* CNMN-CB-02 in the presence of Cu (II) coordinating compounds", specialty 03.00.07 - Microbiology.

11.2007 – 10.2010

Doctoral studies

PhD student, Institute of Microbiology and Biotechnology, 1 Academiei street, Chishinau, Moldova, MD-2028, www.imb.asm.md

▪ Microbiology, knowledge methodology, Spanish language, informatics

09.2002 – 06.2007

Biologist, Diploma of higher education

State University of Tiraspol (headquarters in Chisinau), 5 Iablochchin street, Chishinau, R. Moldova.

▪ *General courses:* Biochemistry, genetics, microbiology, cytology, human anatomy and physiology, histology, biotechnology, botany, zoology, analytical chemistry, inorganic chemistry, organic chemistry, physical and colloidal chemistry, ecology, pedagogy, philosophy, higher mathematics, physics, ethics, psychology, environmental protection.

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Spanish	B1/B2	C1/C2	B1/B2	B1/B2	C1/C2
English	A1/A2	B1/B2	A1/A2	A1/A2	B1/B2
Russian	C1/C2	C1/C2	C1/C2	C1/C2	C1/C2

PERSONAL SKILLS

Communication skills	Team spirit, achieved thanks to working in several research projects; A good communication ability obtained as a result in a collective that includes more 80 scientific researchers; Adaptability in multicultural environments obtained because of the activity in international projects; Ability to lead and conduct research due to experience as a project manager in two research projects for young researchers.
Organisational / managerial skills	Proven leadership and research team coordination skills developed through the management of two research projects involving young researchers; Good experience in the management of national and international projects obtained during the realization of different types of research projects; Experience of analysis and review of research carried out thanks to participation as a member of the IMB Scientific Council.
Job-related skills	Good experience in the management of national and international projects obtained during the realization of different types of research projects; Experience of analysis and review of research carried out thanks to participation as a member of the IMB Scientific Council.
Computer skills	User of common programs and software related to laboratory equipment. The skills were acquired during professional activity. ▪ good command of Microsoft Office™ tools
Other skills	Knowledge of working with laboratory equipment: different types of bioreactors, UV-VIS spectrometry, lyophilization techniques. Knowledge acquired during professional activity.
Driving licence	▪ Category B

ADDITIONAL INFORMATION

Publications	The results of the scientific research have been published in approximately 250 scientific works, including: ✓ Chapters in an international collective monograph – 2 (indexed in Scopus); ✓ Chapters in national monographs – 2; ✓ Articles in journals indexed in the Web of Science and Scopus databases – 6; ✓ Articles in journals included in the National Register of Specialized Journals – 21; ✓ Articles published in the proceedings of international scientific conferences (abroad) – 45; ✓ Articles published in the proceedings of international scientific conferences (Republic of Moldova) – 19; ✓ Articles published in the proceedings of national scientific conferences with international participation – 8; ✓ Articles published in the proceedings of national scientific conferences – 3; ✓ Conference abstracts published in the proceedings of international scientific conferences (abroad) – 21; ✓ Conference abstracts published in the proceedings of international scientific conferences (Republic of Moldova) – 50; ✓ Conference abstracts published in the proceedings of national scientific conferences with international participation (Republic of Moldova) – 16;
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- ✓ Conference abstracts published in the proceedings of national scientific conferences – 3;
- ✓ Patents for inventions – 22;
- ✓ Patent applications filed – 8;
- ✓ Materials presented at invention exhibitions/salons – 24.

Projects

Participation in 7 institutional projects:

020101 „Innovative biotechnological solutions for agriculture, medicine and environmental protection” (2024 - 2027), **Project Researcher**;

15.817.05.17A „Nanotechnological potential in the bioremediation of soil contaminated with persistent organic pollutants” (2015 - 2019), **Project Researcher**;

15.817.05.16A „The use of nanomaterials in the biotechnology of the cultivation of mycelial fungi and yeasts as a strategy to increase biotechnological performances” (2015 - 2019), **Project Researcher**;

11.817.04.11A „Evaluation and exploitation of microbiological potential for the development of sustainable agriculture technologies” (2011 - 2014), **Project Researcher**;

11.817.08.18F „Establishing the mechanisms of modification of the oxidative status and the biochemical composition of the biomass of some microalgae under the action of metallocomplexes in order to obtain antioxidant preparations” (2011 - 2014), **Project Researcher**;

11.817.04.19F „Functional and genetic-molecular aspects of the genome of sunflower (*Helianthus annuus* L.)” (2011 - 2014), **Project Researcher**;

11.817.08.44A „Development of technologies for the selection and directed cultivation of algae strains producing biologically active principles and the use of algal biomass” (2011 - 2014), **Project Researcher**.

6 projects for young researchers:

25.80012.7007.16TC, „Viability and productive potential of pigmented yeasts of the genus *Rhodotorula* – carotenoid producers after long-term preservation” (2025–2026), **Project Leader**;

24.80012.5107.05TC „Combating *Fusarium* wilt and phyto-stimulation of eggplant crop, based on products of bacterial origin” (2024-2025), **Project Researcher**;

18.80012.51.16A „Validation of microbiological and biochemical tests for nanotoxicology studies” (2018 - 2019), **Project Researcher**;

17.80012.51.10A „Natural preservatives of cyanobacterial origin for the preservation of microorganisms” (2017 - 2018), **Project Leader**;

13.819.18.07A „Innovative procedures for exploiting the biosynthetic potential of the microalgae *Dunaliella salina* - superproducer of carotenoids and glycerol” (2013 - 2014), **Project Researcher**;

09.819.18.02A „New technologies for obtaining antioxidant preparations of natural origin” (2009 - 2010), **Project Researcher**;

08.819.0803F „New immunostimulant, anti-anemic and anti-diabetic nutraceutical bioadditives based on spirulina biomass with predicted content of bioactive principles and metabolized bioelements (iron and chromium)” (2008 - 2009), **Project Researcher**.

1 Moldova-Germany bilateral project:

13.820.15.10GA „The use of the digital holographic microscope for the study of biological tissues using LabVIEW” (2013 - 2014), **Project Researcher**.

1 project from the State program:

20.80009.7007.09 „Conservation and valorization of microbial biodiversity as a support

	for the development of technologies and sustainable agriculture, the integration of science and education” (2020 - 2023), Project Researcher; 20.80009.5007.05 ” Biofunctionalized metal nanoparticles - production with the help of cyanobacteria and microalgae” (2020 – 2023), Project Researcher.
Honours and awards	International exhibitions and salons of inventions (2011 – 2026): EUROINVENT, Iasi, România; INVENTCOR, Deva, Romania; „TRAIAN VUIA”, Timișoara, România; PRO INVENT, Cluj-Napoca, România; EXCELLENT IDEA, Chișinău, R. Moldova; INVENTICA, Iași, România; INFOINVENT, Chișinău, R. Moldova; INVENTIKA, București, România (8 gold medals, 3 silver medals, 4 bronze medals). ✚ Honorary Diploma awarded by the Ministry of Education and Research of the Republic of Moldova, in recognition of outstanding achievements and significant contributions to research and innovation, Chisinau, Republic of Moldova (2026); ✚ Certificate of Merit and Award from the Trade Union Committee of the Technical University of Moldova (TUM) for outstanding scientific performance, “Research Vanguard”, presented when the World Science Day for Peace and Development, 3rd Edition (2025). ✚ Honorary Diploma of Technical University of Moldova, when celebrating 60 years of excellence and innovation, Chisinau, Republic of Moldova (2024); ✚ Honorary Diploma of the Ministry of Education, Culture and Research, for outstanding results in research, Chisinau, Republic of Moldova (2020); ✚ Holder of the Research Scholarship „Mircea Ciuhrii” offered by the University of the Academy of Sciences of Moldova, (2017); ✚ Honorary Diploma of the Academy of Sciences of Moldova for outstanding results, Chishinau, Republic of Moldova (2016); ✚ Laureate of the Municipal Prize for Youth in the field of biology, Chisinau, Republic of Moldova (2016); ✚ Mention diploma for participation in the „<i>Invention of the Year</i>” contest, Chisinau, Republic of Moldova (2012); ✚ AGEPI Cup for the „<i>Best Invention presented by a Female Inventor</i>”, Chisinau, Republic of Moldova (2011); ✚ Holder of the Government Scholarship offered by the Government of the Republic of Moldova, Chisinau, Republic of Moldova (2010); ✚ Holder of the World Scholarship of Scholars offered by the World Federation of Scholars from Switzerland (2009 – 2010).
Memberships	Member of the Society of Microbiology from Moldova (2010 – to present); Member of the Biosafety and Biosecurity Association from the Republic of Moldova (2020).

Updated: 16.06.2026