



Școala Doctorală de Biologie

Tematica de cercetare pentru admiterea la doctorat din sesiunea iulie 2026, domeniul Biologie

Anatomie comparată / Comparative Anatomy

Profesor univ. dr. habil. Luminița BEJENARU

(RO)

Studiul unor resturi umane/animale vechi, descoperite în situri arheologice: anatomie comparată; taxonomie; ecologie.

Modelarea unor variații morfometrice sub efectele schimbărilor climatice și ale degradării habitatelor.

(ENG)

Study of ancient human/animal remains, discovered in archaeological sites: comparative anatomy; taxonomy; ecology.

Modeling morphometric

Bibliografie (References)

1. Bejenaru L., 2006. *Arheozoologia Moldovei Medievale*, Editura Universității „Al. I. Cuza” Iași.
2. Brown T., Brown K., 2011. *Biomolecular Archaeology. An Introduction*, Wiley-Blackwell.
3. Driesch A. von den, 1976. *A guide to the measurement of animal bones from archaeological sites*, Peabody Museum, Bulletin 1, Peabody Museum of Archaeology and Ethnology, Harvard University.
4. Goodman R.E., Lebuhn G., Seavy N.E., Gardali T., Bluso-Demers J.D., 2012. Avian body size changes and climate change: warming or increasing variability? *Global Change Biology*, 18, 63–73, doi:10.1111/j.1365-2486.2011.02538.x
5. O’Conor T., 2000. *The Archaeology of Animal Bone*, Sutton Publishing, Marea Britanie.
6. Reitz E.J., Wing E.S., 2008. *Zooarchaeology* (second Edition), Cambridge University Press.
7. Van Buskirk J.; Mulvihill R.S.; Leberman R.C., 2010. Declining body sizes in North American birds associated with climate change. *Oikos* 119(6), 1047–1055. doi:10.1111/j.1600-0706.2009.18349.x
8. Vincze O., Vágási C.I., Pap P.L., Palmer C., Moller A.P., 2019. Wing morphology, flight type and migration distance predict accumulated fuel load in birds. *The Journal of Experimental Biology*, 222. jeb.183517. DOI:10.1242/jeb.183517.
9. White T.D., Folkens P.A., 2005. *The Human Bone Manual*, Elsevier Academic Press.

Fiziologie animală / Animal Physiology

Cercetător Științific I dr. habil. Alin CIOBICĂ

(RO)

1. Studiul interacțiunilor între modificările metabolice (dieta) și gastrointestinale vs. bolile neuropsihiatrice – modele animale și pacienți umani.
2. Studiul unor noi biomarkeri de stres oxidativ și inflamație din urină, lacrimi sau salivă în bolile neuropsihiatrice – modele animale și pacienți umani.
3. Dezvoltarea unor noi modele de boli de neurodezvoltare la peștii zebură.
4. Aspecte de ecologie și toxicologie vs. boli neuropsihiatrice/metabolice/gastrointestinale.
5. Relevanța unor markeri biologici/biochimici în studiile de psihologie/farmacologie.
6. Aspecte de bioetică și legislație în studiul manifestărilor biologice neuropsihiatrice.





7. Cancerul vs. bolile neuropsihiatrice: relevanța unor modificări biochimice și inflamatorii.
8. Markerii biologici și biochimici în relația dintre nutriție și bolile neuropsihiatrice.
9. Relevanța unor manifestări biochimice în relație cu economia comportamentală și neuromarketingul.

(ENG)

1. Study of the interactions between some metabolic (diet) and digestive modifications vs. neuropsychiatric disorders – animal models and human patients.
2. Study of new biomarkers of oxidative stress status and inflammation in urine, tears or saliva – possible relevance for neuropsychiatric disorders (animal models and human patients).
3. Developing new models of neurodevelopmental disorder in zebrafish.
4. Ecological and toxicological aspects vs. most of the neuropsychiatric disorders or metabolic/digestive deficiencies.
5. The relevance of some biological and biochemical markers in some psychology or pharmacology studies.
6. Bioethics and legislation aspects in neuropsychiatric studies.
7. Cancer vs. the neuropsychiatric disorders: the relevance of some biochemical and inflammatory markers.
8. Biological and biochemical markers modulating the relationship between nutrition and most of the neuropsychiatric disorders.
9. The relevance of some biochemical manifestations in relation to behavioural economics and neuromarketing.

Bibliografie (References)

1. Koho Miyoshi, Yasushi Morimura, Kiyoshi Maeda, Neuropsychiatric disorders, Springer, 2010.
2. Hefco V., Fiziologie experimentală. Vol. I-III, Ed. Univ. Iași 1975-1977.
3. Hefco V.P., Fiziologia animalelor și a omului. Ed. Did. Ped. București, 1997.
4. Halliwell B, Gutteridge JMC, Free radical in biology and medicine, 4th edn. Oxford Univ Press, New York, 2007.
5. Melnic, B., Hefco V., Crivoi A., Fiziologia omului și animalelor. Ed. Șt. Chișinău, 1993.
6. Webster RA. Neurotransmitters, drugs and brain function. John Wiley & Sons, 2002.
7. Kaidanovich-Beilin O, Cha DS, McIntyre RS. Crosstalk between metabolic and neuropsychiatric disorders. *F1000 Biol Rep.* 2012; 4:14. doi:10.3410/B4-14.
8. Peedicayil J. Identification of Biomarkers in Neuropsychiatric Disorders Based on Systems Biology and Epigenetics. *Front Genet.* 2019; 10:985. Published 2019 Oct 11. doi:10.3389/fgene.2019.00985 10.
9. Vaz R, Hofmeister W, Lindstrand A. Zebrafish Models of Neurodevelopmental Disorders: Limitations and Benefits of Current Tools and Techniques. *Int J Mol Sci.* 2019; 20(6):1296. Published 2019 Mar 14. doi:10.3390/ijms20061296
10. Coccini T, Roda E, Sarigiannis DA, Manzo L. Assessing health effects of environmental contaminants by molecular markers. Studies on methylmercury and polychlorinated biphenyls as examples of translational research in environmental toxicology. *G Ital Med Lav Ergon.* 2010 Jan-Mar;32(1): 5-12. PMID: 20464972.
11. Hammoud, R., Tognin, S., Smythe, M. et al. Smartphone-based ecological momentary assessment reveals an incremental association between natural diversity and mental wellbeing. *Sci Rep* 14, 7051 (2024). <https://doi.org/10.1038/s41598-024-55940-7>
12. Toljan K, Vrooman B. Low-Dose Naltrexone (LDN)-Review of Therapeutic Utilization. *Med Sci (Basel).* 2018 Sep 21;6(4):82. doi: 10.3390/medsci6040082. PMID: 30248938; PMCID: PMC6313374.
13. Samina Salim, Oxidative stress: a potential link between emotional wellbeing and immune response, *Current Opinion in Pharmacology*, Volume 29, 2016, Pages 70-76, ISSN 1471-4892, <https://doi.org/10.1016/j.coph.2016.06.006>.
14. Glannon W. Neuroscience, Law, and Ethics. *Int J Law Psychiatry.* 2019 Jul-Aug;65:101459. doi: 10.1016/j.ijlp.2019.101459. Epub 2019 Jul 4. PMID: 31280908.
15. Chaturvedi SK. Psychiatric oncology: Cancer in mind. *I J Psychiatry.* 2012 Apr;54(2):111-8. doi: 10.4103/0019-5545.99529. PMID: 22988317; PMCID: PMC3440904.
16. Martins LB, Berk M, Ferreira AVM and Teixeira AL (2023) Editorial: Nutrition and brain: bidirectional link in neuropsychiatry disorders. *Front. Nutr.* 10:1212075. doi: 10.3389/fnut.2023.1212075.
- 17.



**Citologie animală și filogeografie / Animal cytology and phylogeography**

Conferențiar univ. dr. habil. Lucian FUSU

(RO)

1. Taxonomie moleculară și filogenomică.
2. Delimitarea speciilor și speciația, taxonomia integrativă a viespilor parazitoide.
3. Culturi de celule animale ca modele *in vitro*.

(ENG)

1. Molecular systematics and phylogenomics.
2. Species delimitation and speciation, integrative taxonomy of parasitoid wasps.
3. Animal cell cultures as *in vitro* models.

Bibliografie (References):

1. Freeland J.R, Kirk H., Petersen S.D. 2011. Molecular Ecology, 2nd edition. Wiley-Blackwell.
2. Freshney, R. I. 2010. Culture of animal cells: A manual of basic technique and specialized applications, 6th edition. Wiley-Blackwell.
3. John J., Woolley J. (eds.) 2025. Chalcidoidea of the World. CAB International
4. Scornavacca C., Delsuc F., Galtier N. (eds.) 2020. Phylogenetics in the Genomic Era. No commercial publisher. Authors open access book.
5. Winston J. E. 1999. Describing species: practical taxonomic procedure for biologists. Columbia University Press.

Genetică și biologie moleculară / Genetics and Molecular Biology

Profesor univ. dr. habil. Dragoș-Lucian GORGAN

(RO)

1. Genomică și genomics funcțională – expresie genică și cuantificarea expresiei genice în diferite condiții experimentale.
2. Filogenie și filogeografie moleculară.
3. Diversitate genetică.

(EN)

1. Genomics and functional genomics – gene expression and quantification of gene expression under different experimental conditions.
2. Phylogeny and molecular phylogeography.
3. Genetic diversity.

Bibliografie (References)

1. Băra I., Cîmpeanu M. M., 2003, Genetica, Editura Corson, 233p.
2. Beebe T., ROWE G., 2005, An introduction to molecular ecology 335 p.
3. Biassoni R., RASO A., 2014, Quantitative Real-Time PCR, Methods in molecular biology 1160, Springer, ISSN 1064-3745, ISSN 1940-6029, 233p.
4. Ciorpac M., Druică R.C., Ghiorghită G., Cojocaru D., Gorgan D.L., 2016, CHD genes: a reliable marker for bird populations and phylogenetic analysis? Case study superfamily Sylvioidea (Aves: Passeriformes), Turkish Journal of Zoology, 40, DOI: 10.3906/zoo-1510-22
5. Georgescu S. E., Dudu A., Costache M., 201, Tehnici de biologie moleculară, Editura Univ. București, 978-606-16-0729-7, 250 p.
6. Gorgan D. L., 2007, Filogenie Moleculară în cadrul genurilor *Cyprinus* și *Carassius*, Editura Universității „Al. I. Cuza” Iași, 400 p., ISBN 978-973-703-209-6.
7. Hensel K., Kučerová K., Tarabová B., Janda M., Machala Z., Sano K., Mihai C.T., Ciorpac M., Gorgan L.D., Jijie R.,





- Pohoata V., Topala I., 2015, Effects of air transient spark discharge and helium plasma jet on water, bacteria, cells and biomolecules, *Biointerphases*, 10(2), p 029515
8. Ion C., Bolboaca L., Ciorpac M., Stefan A., Gorgan L., 2012, A Great Reed Warbler x Reed Warbler hybrid (*Acrocephalus arundinaceus* x *Acrocephalus scirpaceus*) in North Eastern Romania, *Journal of Ornithology*, 153(3), p. 975-978
 9. Lesk M. A., 2007, *Introduction to genomics*, Oxford University Press, 405p.
 10. Mihășan M., Ștefan M., Olteanu Z., 2013, *Biologie moleculară: metode experimentale*, Editura Universității „Al. I. Cuza”, ISBN 978-973-703-816-6, 360p.
 11. Nei M., Kumar S., 2000, *Molecular evolution and phylogenetics*, Oxford University Press, 333p.
 12. Tevfik D.M., 2006, *Real-time PCR*, Taylor & Francis Group, 362p.

Fiziologie animală / Animal Physiology

Profesor univ. dr. habil. Lucian HRIȚCU

(RO)

1. Evaluarea biologică complexă a unor substanțe bioactive naturale/de sinteză ca remedii terapeutice pe model experimental animal de demență.
2. Studii complexe în domeniul afecțiunilor oncologice, hematologice și endocrinologice.

(ENG)

1. Complex biological evaluation of natural / synthetic bioactive substances as therapeutic remedies on experimental animal model of dementia.
2. Complex studies in the field of oncological, hematological and endocrinological diseases.

Bibliografie (References)

1. Hritcu L., Cioanca O., 2016, *Prevalence of Use of Herbal Medicines and Complementary and Alternative Medicine in Europe*, in: Grosso, C. (Ed.) *Herbal Medicine in Depression: Traditional Medicine to Innovative Drug Delivery*. Springer International Publishing, Cham, pp. 135-181.
2. Hritcu L. 2011, *Neurofiziologie – Rolul unor neurotransmițători și zone nervoase în modularea proceselor cognitive și imunitare*, Editura Universității „Alexandru Ioan Cuza” din Iași, ISBN 978-973-640-670-6, 231 pagini.
3. Hritcu L. 2012, *Fiziologie animală experimentală*, Editura Universității „Alexandru Ioan Cuza” din Iași, ISBN: 978-973-703-849-4, 130 pagini.
4. Hritcu L., Hefco V. 2007, *Elemente de fiziologia animalelor și a omului – funcții de relație*. Editura PIM (acreditată CNCIS, cod CNCIS 66), Iași, ISBN 978-973-716-695-1, 301 pagini.
5. Hritcu L. 2010, *Fiziologia animalelor și a omului – sistemul endocrin, reproducerea și funcțiile de nutriție*. Editura Tehnopress (acreditată CNCIS, cod CNCIS 89), Iași, ISBN 978-973-702-580-7, 392 pagini.
6. Hefco V. 1997, *Fiziologia animalelor și a omului*, Editura Didactică și Pedagogică, București, 633 pagini.
7. Kandel E, Schwartz J, Jessell T, 2000, *Principles of Neural Science, Fourth Edition*, McGrawHill.

Biochimie, Biologie moleculară / Biochemistry, Molecular Biology

Profesor dr. habil. Marius MIHĂȘAN

(RO)

1. Caracterizarea completă a căilor catabolice codificate de megaplasmidul pAO1 din *Paenarthrobacter nicotinovorans* din punct de vedere al originii, evoluției, organizării moleculare și aplicațiilor biotehnologice.
2. Tehnologii omice pentru explorarea biodiversității metabolice a microorganismelor din nise ecologice variate.





(ENG)

1. Origin, evolution and biotechnological applications of the catabolic pathways encoded by the pAO1 megaplasmid of *Paenarthrobacter nicotinovorans*.
2. Omics technologies for exploring the metabolic biodiversity of microorganisms in diverse ecological niches

Bibliografie (References)

1. Igloi, G. L., & Brandsch, R. (2003). Sequence of the 165-kilobase catabolic plasmid pAO1 from *Arthrobacter nicotinovorans* and identification of a pAO1-dependent nicotine uptake system. *J Bacteriol*, 185(6), 1976–1986. <http://view.ncbi.nlm.nih.gov/pubmed/12618462>
2. Ganas, P., Igloi, G. L., & Brandsch, R. (2009). The Megaplasmid pAO1 of *Arthrobacter Nicotinovorans* and Nicotine Catabolism. In E. Schwartz (Ed.), *Microbial Megaplasms* (Vol. 11, pp. 271–282). Berlin, Heidelberg: Springer Berlin Heidelberg. <http://doi.org/10.1007/978-3-540-85467-8>
3. Mihasan, M., & Brandsch, R. (2013). pAO1 of *Arthrobacter nicotinovorans* and the spread of catabolic traits by horizontal gene transfer in gram-positive soil bacteria. *Journal of Molecular Evolution*, 77(1–2), 22–30. <http://doi.org/10.1007/s00239-013-9576-x>
4. Liu, J., Ma, G., Chen, T., Hou, Y., Yang, S., Zhang, K.-Q., & Yang, J. (2015). Nicotine-degrading microorganisms and their potential applications. *Applied Microbiology and Biotechnology*, 99(9), 3775–3785. <http://doi.org/10.1007/s00253-015-6525-1>
5. Brandsch, R. (2006). Microbiology and biochemistry of nicotine degradation. *Appl Microbiol Biotechnol*, 69(5), 493–498. <http://doi.org/10.1007/s00253-005-0226>
6. Hritcu, L., Stefan, M., Brandsch, R., & Mihasan, M. (2015). Enhanced behavioral response by decreasing brain oxidative stress to 6-hydroxy-l-nicotine in Alzheimer's disease rat model. *Neuroscience Letters*, 591, 41–47. <http://doi.org/10.1016/j.neulet.2015.02.014>
7. Hritcu, L., Ionita, R., Motei, D. E., Babii, C., Stefan, M., & Mihasan, M. (2017). Nicotine versus 6-hydroxy-l-nicotine against chlorisondamine induced memory impairment and oxidative stress in the rat hippocampus. *Biomedicine & Pharmacotherapy*, 86, 102–108. <http://doi.org/10.1016/j.biopha.2016.12.008>
8. Hritcu L. & Mihasan M. 2019. 6-Hydroxy-l-Nicotine and Memory Impairment. pp. 165–172. In: Victor R. Preedy (eds), *Neuroscience of Nicotine*, Elsevier, <http://doi.org/10.1016/B978-0-12-813035-3.00021-6>
9. Mihășan M., Babii C., Aslebagh R., Channaveerappa D., Dupree E. & Darie C.C. 2018. Proteomics based analysis of the nicotine catabolism in *Paenarthrobacter nicotinovorans* pAO1. *Scientific Reports* 8: 16239. <http://doi.org/10.1038/s41598-018-34687-y>
10. Boiangiu R.S., Mihasan M., Gorgan D.L., Stache B.A., Petre B.A. & Hritcu L. 2020. Cotinine and 6-Hydroxy-L-Nicotine Reverses Memory Deficits and Reduces Oxidative Stress in Aβ25-35-Induced Rat Model of Alzheimer's Disease. *Antioxidants*. 9: 768. <http://doi.org/10.3390/antiox9080768>
11. Boiangiu R.S., Mihasan M., Gorgan D.L., Stache B.A. & Hritcu L. 2021. Anxiolytic, Promnesic, Anti-Acetylcholinesterase and Antioxidant Effects of Cotinine and 6-Hydroxy-L-Nicotine in Scopolamine-Induced Zebrafish (*Danio rerio*) Model of Alzheimer's Disease. *Antioxidants*. 10: 212. <http://doi.org/10.3390/antiox10020212>
12. Mihășan M., Boiangiu R.Ș., Guzun D., Babii C., Aslebagh R., Channaveerappa D., Dupree E. & Darie C.C. 2021. Time-Dependent Analysis of *Paenarthrobacter nicotinovorans* pAO1 Nicotine-Related Proteome. *ACS Omega*. <http://doi.org/10.1021/acsomega.1c01020>
13. Nikolaki S, Tsiamis G. Microbial diversity in the era of omic technologies. *Biomed Res Int*. 2013;2013:958719. doi: 10.1155/2013/958719. Epub 2013 Oct 24. PMID: 24260747; PMCID: PMC3821902.
14. Wilms, S. N. (2021). A Beginner's Guide on Integrating *Omics Approaches to Study Marine Microbial Communities: Details and Discussions From Sample Collection to Bioinformatics Analysis. *Frontiers in Marine Science*, 8, 692538. <https://doi.org/10.3389/fmars.2021.692538>
15. Jurburg, S.D., Buscot, F., Chatzinotas, A. et al. The community ecology perspective of omics data. *Microbiome* 10, 225 (2022). <https://doi.org/10.1186/s40168-022-01423-8>
16. Zha, Y., Chong, H., Yang, P., & Ning, K. (2022). Microbial Dark Matter: From Discovery to Applications. *Genomics, Proteomics & Bioinformatics*, 20(5), 867–881. <https://doi.org/10.1016/j.gpb.2022.02.007>
17. Zhang, Y., Wang, Y., Tang, M. et al. The microbial dark matter and “wanted list” in worldwide wastewater treatment plants. *Microbiome* 11, 59 (2023). <https://doi.org/10.1186/s40168-023-01503-3>
18. Li, S., Lian, W., Han, J., Ali, M., Lin, Z., Liu, Y., Li, L., Zhang, D., Jiang, X., Li, W., & Dong, L. (2023). Capturing the microbial dark matter in desert soils using culturomics-based metagenomics and high-resolution analysis. *Npj Biofilms and Microbiomes*, 9(1), 1–14. <https://doi.org/10.1038/s41522-023-00439-8>





- de Cerna, A., Zhang, B., Deng, D., Damé-Teixeira, N., Do T. Low-Abundant Microorganisms: The Human Microbiome's Dark Matter, a Scoping Review. *Front Cell Infect Microbiol.* 2021 May 31;11:689197. doi: 10.3389/fcimb.2021.689197. PMID: 34136418; PMCID: PMC8201079.
- Ma, B., Lu, C., Wang, Y. et al. A genomic catalogue of soil microbiomes boosts mining of biodiversity and genetic resources. *Nat Commun* 14, 7318 (2023). <https://doi.org/10.1038/s41467-023-43000-z>
- Ma B, Lu C, Wang Y, et al. Soil microbial dark matter explored from genome-resolved metagenomics. *Research Square*; 2023. DOI: 10.21203/rs.3.rs-2680397/v1.

Zoologie / Zoology

Profesor univ. dr. habil. Mircea Dan MITROIU

(RO)

Sistematica și ecologia viespilor parazitoide (Insecta: Hymenoptera)

(ENG)

Systematics and ecology of parasitoid wasps (Insecta: Hymenoptera)

Bibliografie (References):

- Gauld, I. & Bolton, B., 1988. *The Hymenoptera*. Oxford University Press, New York.
- Goulet, H. & Huber, J.T. (eds), 1993. *Hymenoptera of the World: an Identification Guide to Families*. Research Branch, Agriculture Canada.
- Jervis, M. & Kidd, N. (eds), 1996. *Insect Natural Enemies. Practical approaches to their study and evaluation*. Chapman & Hall.
- Noyes, J.S., 1982. Collecting and preserving chalcid wasps (Hymenoptera: Chalcidoidea). *Journal of Natural History* 16: 315-334.
- Lemey, P., Salemi, M. & Vandamme, A.-M. (eds), 2009. *The Phylogenetic Handbook. A Practical Approach to Phylogenetic Analysis and Hypothesis Testing*. Cambridge University Press.
- Quicke, D.L.J., 1997. *Parasitic Wasps*. Chapman & Hall, London, UK.
- Wheeler, W.C., 2012. *Systematics: A Course of Lectures*. Wiley-Blackwell.
- Wiley, E.O., Siegel-Causey, D., Brooks, D.R. & Funk, V.A., 1991. *The Complete Cladist. A Primer of Phylogenetic Procedures*. The University of Kansas Museum of Natural History, Special Publications 19.
- Winston, J.E., 1999. *Describing Species. Practical Taxonomic Procedure for Biologists*. Columbia University Press, New York.

Biochimie/Biochemistry

Conferențiar univ. dr. habil. Lăcrămioara Anca OPRICĂ

(RO)

- Nanoparticule metalice: sinteză biologică, caracterizare și evaluarea impactului asupra organismelor.
- Răspunsuri biochimice și fiziologice la specii de plante de interes economic (terapeutic, biotehnologic), în condiții de stres abiotic (salin, hidric, radiații).
- Identificarea, testarea și evaluarea biochimică a unor biocompuși la specii de plante spontane sau cultivate.

(ENG)

- Metallic nanoparticles: biological synthesis, characterization and impact on organisms.
- Biochemical and physiological responses of economically useful plants (medicinal, biotechnological application) under abiotic (salt, drought, radiation) stress conditions.
- Biochemical identification, testing, and assessment of biocompounds from wild and cultivates plant species.



**Bibliografie (References)**

1. Aftab T., Hakeem KR, 2022, Plant Abiotic Stress Physiology, Vol. 2, Molecular Advancements, Apple Academic Press.
2. Egorova EM, Kubatiev AA, Schvets VI, Biological Effects of Metal Nanoparticles, Springer
3. Oprică L, Vochița G, 2021, Enzymatic activity in halophytes, In: Handbook of Halophytes. From Molecules to Ecosystems towards Biosaline Agriculture (Ed. Grigore MN), Springer, 1877-1900. https://doi.org/10.1007/978-3-030-17854-3_77-1
4. Oprică L., 2016 – Metaboliți secundari la plante. Origine, structură, funcții, Editura Universității “Alexandru Ioan Cuza” Iași, 294 pagini.
5. Oprică L., Shvidkiy S., Molokanov A., Vochita G., Creanga D., 2022, Some effects of proton irradiation in young seedlings of wheat, Romanian Journal of Physics, 67(9-10), 813.
6. Oprica L., Vochita G., Grigore M.-N., Shvidkiy S., Molokanov A., Gherghel D., Les, A., Creanga D., 2023, Cytogenetic and Biochemical Responses of Wheat Seeds to Proton Irradiation at the Bragg Peak, Plants, 12(4), 842.
7. Racuciu M, Creanga DE, Oprica L, 2023, Nanosized ferrites in environmental sciences, cap 17, In: Applications of nanostructured ferrites (Ed. Singh JP, Chae KH, Srivastava RC, Caltun OF), 357-377, Elsevier.
8. Saquib Q., Faisal M, Al-Khedhairy AA., Alatar AA, 2020, Green Synthesis of Nanoparticles: Applications and Prospects, Springer.
9. Sarkar B, Sonawane A, 2023, Biological Applications of Nanoparticles, Springer
10. Singh P., Kim Y-J, Zhang D., Yang D-C, 2016, Review Biological Synthesis of Nanoparticles from Plants and Microorganisms, Cell Press.

Taxonomia integrativă a nevertebratelor acvatice /
Integrative taxonomy of aquatic invertebrates
Conferențiar univ. dr. habil. Victor SURUGIU

(RO)

1. Taxonomia, biologia, ecologia și biogeografia lipitorilor (Annelida: Hirudinea) din România
2. Sistematica, biologia, ecologia și biogeografia polichetelor (Annelida) de la litoralul românesc al Mării Negre

(ENG)

1. Taxonomy, biology, ecology and biogeography of leeches (Annelida: Hirudinea) from Romania
2. Systematics, biology, ecology and biogeography of polychaetes (Annelida) from the Romanian Black Sea coast

Bibliografie (References)

1. Eleftheriou, A., 2013. *Methods for the Study of Marine Benthos*. 4th Edition. Wiley-Blackwell, Chichester, West Sussex, UK. <https://doi.org/10.1002/9781118542392>
2. Neseemann H., Neubert E., 1999. Annelida, Clitellata: Branchiobdellida, Acanthobdellea, Hirudinea. In: Schwoerbel J., Zwick P. (eds) *Süßwasserfauna von Mitteleuropa*, Band 6/2. Spektrum Akademischer Verlag, Heidelberg, Berlin.
3. Purschke, G., Böggemann, M. Westheide, W., 2019-2022. *Handbook of zoology. Annelida*. Vols. 1-4, De Gruyter, Berlin, Boston. <https://doi.org/10.1515/9783110291582>
4. Rouse, G., Pleijel, F., Tilic, E., 2022. *Annelida*. Oxford Academic, Oxford. <https://doi.org/10.1093/oso/9780199692309.001.0001>
5. Sawyer, R.T., 1986. *Leech biology and behaviour*. Vols. I-III. Clarendon Press, Oxford.
6. Shain, D.H., 2009. *Annelids in Modern Biology*. Wiley-Blackwell, Hoboken, New Jersey. <https://doi.org/10.1002/9780470455203>
7. Surugiu, V. 2008. *Populațiile de polichete de la litoralul românesc al Mării Negre*. Ed. Universității „Alexandru Ioan Cuza” din Iași.
8. Trivedi, S., Ansari, A. A., Ghosh, S. K., Rehman, H., 2016. *DNA barcoding in marine perspectives: Assessment and conservation of biodiversity*. Springer International Publishing, Switzerland. <https://doi.org/10.1007/978-3-319-41840-7>
- 9.





**Microbiologie, Biotehnologii microbiene /
Microbiology, Microbial biotechnologies**
Profesor univ. dr. habil. Marius ȘTEFAN

(RO)

3. Studiul efectelor antimicrobiene ale unor compuși naturali și de sinteză
4. Studiul fenomenului de rezistență la antibiotice
5. Microorganisme de interes biotehnologic

(ENG)

1. Study of the antimicrobial effects of some natural and synthetic compounds
2. Study of antibiotic resistance
3. Microorganisms of biotechnological interest

Bibliografie (References)

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