

PERSONAL INFORMATION

Monica Neagu



 Timișoara, Romania



 neagu.monica@umft.ro

Sex female | Year of birth 1967 | Nationality romanian

WORK EXPERIENCE

october 2007 - present

Associate professor (conferențiar)

“Victor Babeș” University of Medicine and Pharmacy Timișoara, Romania. P-ța Eftimie Murgu Nr. 2, 300041 Timișoara, Romania, Telefon/Fax: (40-256) 204117

Lectures in medical biophysics at the Faculty of General Medicine, lectures in pharmaceutical physics at the Faculty of Pharmacy, research in body composition analysis

Discipline of Biophysics

february 2002 - october 2007

Lecturer (șef de lucrări)

“Victor Babeș” University of Medicine and Pharmacy Timișoara, Romania. P-ța Eftimie Murgu Nr. 2, 300041 Timișoara, Romania, Telefon/Fax: (40-256) 204117

Lectures and laboratory works in medical biophysics at the Faculty of General Medicine

Discipline of Biophysics

october 1995 - february 2002

Teaching Assistant (asistent universitar)

“Victor Babeș” University of Medicine and Pharmacy Timișoara, Romania. P-ța Eftimie Murgu Nr. 2, 300041 Timișoara, Romania, Telefon/Fax: (40-256) 204117

Laboratory works in medical biophysics at the Faculty of General Medicine

Discipline of Biophysics

october 1992 - october 1995

Teaching Assistant (preparator universitar)

“Victor Babeș” University of Medicine and Pharmacy Timișoara, Romania. P-ța Eftimie Murgu Nr. 2, 300041 Timișoara, Romania, Telefon/Fax: (40-256) 204117

Laboratory works in medical biophysics at the Faculty of General Medicine

Discipline of Biophysics

EDUCATION AND TRAINING

april 1995 - february 2002

PhD

ISCED 6

West University of Timisoara, blvd. Vasile Pârvan no.4, Timișoara, Romania

Thesis title: “Physical chemistry aspects of transmembrane transport”

Physical chemistry

october 1985 - july 1991

Masters degree

ISCED 5A

West University of Timisoara, Faculty of Physics, blvd. Vasile Pârvan no.4, Timisoara, Romania
Physics

PERSONAL SKILLS

Mother tongue

Romanian and Hungarian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C2	C2	C2
French	B1	B1	A2	A2	B1

Social skills Research internships in the country and abroad have developed teamwork skills

Organizational skills Organizational skills acquired through participation in 6 research contracts (5 national and 1 international). In one of these projects (CEEX 62/2005) I was scientific manager at the "Victor Babeş" University of Medicine and Pharmacy in Timișoara. I was a member of the organizing committees of 3 National Biophysics Conferences with international participation (The 7-th National Conference of Biophysics, October 5-7, 2003, Predeal, Romania; The 11-th National Conference of Biophysics, November 10-12, 2011, Sibiu, Romania; The 13-th National Conference of Biophysics, June 4-6, 2015, Timișoara, Romania).

Digital skills User of Microsoft Office (Word, Excel, Project, PowerPoint), Adobe Acrobat, Adobe Photoshop, programming in MATLAB

Other skills I am passionate about photographic art and organic gardening

Driving licence B

ADDITIONAL INFORMATION

2004 - 2015, President of the Timișoara Branch of the Romanian Society of Pure and Applied Biophysics (RSPAB)

2023 – present, Secretary of the Romanian Society of Pure and Applied Biophysics (RSPAB)

Member of the editorial board of the Romanian Journal of Biophysics

Publications 8 books and 41 papers in peer reviewed journals

Over 170 independent citations according to Web of Science Core Collection Citation Report

Hirsch index 8

Representative publications

1. Neagu M, Robu A, Arjoca S, Neagu A. 2026. Cell-Based Computational Models of Organoids: A Systematic Review, *Cells* 2026; 15(2):177.
2. Tuce RA, Pupăzan V, Neagu M, Arjoca S, Neagu A. 2026. The use of thermal imaging to assess heat generation during dental implant bed preparation in the presence of a surgical guide with an incorporated coolant channel. *J Prosthodont.* 2026, doi:10.1111/jopr.70078.
3. Neagu M, Neagu A. 2025. A Decade of Progress in Ultrasound Assessments of Subcutaneous and Total Body Fat: A Scoping Review, *Life* 2025 Feb 5;15(2):236.
4. Muntean P, Miclos-Balica M, Macavei GA, Munteanu O, Neagu A, Neagu M. 2024. Anthropometric formulas repurposed to predict body fat content from ultrasound measurements of subcutaneous fat thickness, *Symmetry.* 2024; 16 (8): 962.
5. Arjoca S, Bojin F, Neagu M, Păunescu A, Neagu A, Păunescu V. 2024. Hydrogel extrusion speed measurements for the optimization of bioprinting parameters, *Gels.* 10 (2): 103.
6. Tuce RA, Neagu M, Pupăzan V, Neagu A, Arjoca S. 2023. The 3D Printing and Evaluation of Surgical Guides with an Incorporated Irrigation Channel for Dental Implant Placement, *Bioengineering.* 10(10):1168.
7. Muntean P, Popa A, Miclos-Balica M, Schick F, Munteanu O, Pupăzan V, Neagu A, Neagu M. 2023. Learning Effects in Air Displacement Plethysmography, *Life* 13(6):1215.
8. Muntean P, Neagu M, Amăricăi E, Hărăguș HG, Onofrei RR, Neagu A. 2023. Using A-Mode Ultrasound to Assess the Body Composition of Soccer Players: A Comparative Study of Prediction Formulas, *Diagnostics* 13(4):690.
9. Arjoca S, Robu A, Neagu M, and Neagu A. 2023. Mathematical and computational models in spheroid-based biofabrication, *Acta Biomaterialia* 165:125-139.
10. Horhat R, Miclos-Balica M, Muntean P, Popa S, Sima I, Glisici B, Cîrja O, Neagu A, and Neagu M. 2022. The impact of subject positioning on body composition assessments by air displacement plethysmography evaluated in a heterogeneous sample, *PLOS ONE* 17:e0267089.1.
11. Miclos-Balica M, Muntean P, Schick F, Hărăguș HG, Glisici B, Pupăzan V, Neagu A, Neagu M. 2021. Reliability of body composition assessment using A-mode ultrasound in a heterogeneous sample. *Eur J Clin Nutr.* 75(3):438-445.
12. Muntean P, Miclos-Balica M, Popa A, Neagu A, Neagu M. 2021. Reliability of Repeated Trials Protocols for Body Composition Assessment by Air Displacement Plethysmography. *Int J Environ Res Public Health* 18(20): 10693.

13. Bojin F, Robu A, Bejenariu MI, Ordodi V, Olteanu E, Cean A, Popescu R, Neagu M, Gavriliuc O, Neagu A, Arjoca S, Păunescu V. 2021. 3D bioprinting of model tissues that mimic the tumor microenvironment. *Micromachines (Basel)* 12(5):535.
14. Tuce R-A, Arjoca S, Neagu M, Neagu A. 2019. The use of 3D-printed surgical guides and models for sinus lift surgery planning and education, *Journal of 3D Printing in Medicine* 3(3):145-155.
15. Neagu M. 2015. Analytic formulation of the stochastic energization-relaxation channel model of proton pumping by bacterial rhodopsins, *Romanian Journal of Biophysics* 25(4): 233-245.
16. Robu A, Aldea R, Munteanu O, Neagu M, Stoicu-Tivadar L, Neagu A. 2012. Computer simulations of in vitro morphogenesis, *Biosystems* 109: 430-443.
17. Neagu A, Mironov V, Kosztin I, Barz B, Neagu M, Moreno-Rodriguez RA, Markwald RR, Forgacs G. 2010. Computational modeling of epithelial-mesenchymal transformations, *Biosystems* 100: 23-30.
18. Doagă IO, Savopol T, Neagu M, Neagu A, Kovács E. 2008. The Kinetics of Cell Adhesion to Solid Scaffolds: An Experimental and Theoretical Approach, *J. Biol. Phys.* 34:495-509.
19. Neagu A, Kosztin I, Jakab K, Barz B, Neagu M, Jamison R, Forgacs G. 2006. Computational modeling of tissue self-assembly, *Modern Phys. Lett. B* 20:1217-1231.
20. Mihaș G I, Holban S, Cireșan D, Cernăzanu C, Simon Z, Zaharie D, Kigyosi A, Neagu A, Muntean C, Focșă M, Lungeanu D, Neagu M. 2005. Bio-View - a user-friendly interface for computer simulations in systems biology, In: *Connecting Medical Informatics and Bio-Informatics*, Engelbrecht R. et al. (editors), ENMI 2005.
21. Neagu M, Neagu A. 2001. On the Na, K pump in fluctuating membrane potential. *European Biophysics Journal* 30:221-226.
22. Neagu A, Neagu M, Dér A. 2001. Fluctuations and the Hofmeister effect. *Biophys. J.* 81:1285-1294.
23. Neagu A, Neagu M, Dér A. 2001. Active transport modulated by barrier fluctuations. In: *Bioelectronic Applications of Photochromic Pigments*, NATO Science Series, vol. 335, Dér A, Keszthelyi L, (editors), (IOS Press, Amsterdam, 2001), pp. 225-243.
24. Marincu BN, Neagu M, Munteanu O, Neagu A. 2010. Kinetic study of platelet aggregation, *Romanian Journal of Biophysics* 20 (2): 101-114.
25. Neagu A, Neagu M, Forgacs G. 2005. Simulating artificial tissues - A heuristic tool in tissue engineering? *Romanian Journal of Biophysics* 15: 9-14.
26. Neagu M, Suci E, Ordodi V, Păunescu V. 2005. Human Mesenchymal Stem Cells as Basic Tools for Tissue Engineering: Isolation and Culture, *Romanian Journal of Biophysics* 15: 29-34.
27. Neagu M, Neagu A, Motoc M, Anghel A. 2003. The kinetics of active transport in fluctuating membrane potentials. *Timisoara Medical Journal* 53:17-20.
28. Neagu A, Neagu M, Motoc M. 2003. Thermal fluctuations of liposomes with solid content. *Timisoara Medical Journal* 53, Supplement 2:77-80.
29. Neagu M, Neagu A. 2003. A kinetic theory of active transport based on the stochastic energization-relaxation channel model. *Timisoara Medical Journal* 53, Supplement 2:81-86
30. Neagu A, Neagu M. 2002. Efecte ale unor săruri asupra fotociclului bacteriorodopsinei. *Timisoara Medical Journal* 52:127-130.
31. Neagu A, Neagu M, Nagy II. 2002. Efectul Hofmeister. *Timisoara Medical Journal* 52:103-107.
32. Neagu A, Nagy II, Neagu M. 2000. Free energy approach to pinocytosis in two dimensions. *Romanian Journal of Biophysics* 10:89-97.
33. Neagu M, Neagu A. 2000. The impact of noise on the Na, K ATPase. *Romanian Journal of Biophysics* 10:49-58.
1. Neagu M, Munteanu O, Nagy I I, Neagu A. *Lucrări Practice de Biofizică*, Editura Eurobit, Timișoara, 2025; ISBN: 978-973-620-978-9.
2. Horhat R, Denov E, Munteanu O, Neagu M. *Travaux Pratiques de Physique et Biophysique*, Editura Eurobit, Timișoara, 2025; ISBN: 978-973-620-997-0.
3. Marincu BN, Neagu M, Neagu A. *Laboratory Works in Biophysics Second Edition*, Editura Eurobit, Timișoara, 2012; ISBN: 978-973-620-988-8.
4. Neagu M. *Fizică pentru Facultatea de Farmacie*, Editura Eurobit, Timișoara, 2008; ISBN 978-973-620-461-6.
5. Neagu A, Neagu M. *Curs de Biofizică pentru Facultatea de Medicină Dentară*, Editura Eurobit, Timișoara, 2007; ISBN: 978-973-620-264-3.
6. Neagu A, Neagu M, Mihaș G I. *Textbook of Biophysics Second Edition*, Editura Eurobit, Timișoara, 2005; ISBN: 973-620-194-5.
7. Nagy I I, Mihaș G I, Neagu M, Bălăceanu L, Neagu A. *Curs de Biofizică*, Editura Eurobit, Timișoara, 2005; ISBN: 973-8181-66-6.
8. Nagy I I, Mihaș G I, Neagu M, Neagu A. *Testele de fizică pentru concursul de admitere la Facultățile de Medicină Generală și Stomatologie*, Editura Eurobit, Timișoara, 1999; ISBN: 973-96532-4-3.