

Europass Curriculum Vitae



Personal information

Surname(s) / First name(s) **MILITARU Andra - Cristina**

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Nationality Romanian

Date of birth 02.05.1985

Gender Female

Work experience

Dates January 2011 onwards

Occupation or position held Research Scientist

Main activities and responsibilities Spectrophotometric studies on biomolecules and optical imaging studies on biomolecular aggregates within the Laser Spectroscopy Group; biological assays of laser modified medicines on Gram-positive and Gram-negative bacteria.

Name and address of employer National Institute for Laser, Plasma and Radiation Physics; Laser Department, 409 Atomistilor str., com. Magurele, Jud. Ilfov, 077125, Romania

Type of business or sector Research and Education

Dates September 2008 – December 2010

Occupation or position held Research Assistant Scientist

Main activities and responsibilities Spectrophotometric studies on biomolecules within the Laser Spectroscopy Group

Name and address of employer National Institute for Laser, Plasma and Radiation Physics; Laser Department, 409 Atomistilor str., com. Magurele, Jud. Ilfov, 077125, Romania

Type of business or sector Research and Education

Education and training

Dates October 2010 onwards

Principal subjects/occupational skills covered Optics, Spectroscopy, Plasma, Lasers; thesis title 'Optical and Spectral Studies of the Stability of Medicines Solutions under Variable Environmental Conditions'

Name and type of organisation providing education and training - Faculty of Physics, University of Bucharest, Romania

Level in national or international classification PhD

Dates October 2008 – February 2010

Principal subjects/occupational skills covered Biophysics and Medical Physics. Electronic Physics and Metrology; thesis title 'The Electrochemical Study of Lumazine'

Name and type of organisation providing education and training - Faculty of Physics, University of Bucharest, Romania
 - Faculty of Science and Technology, Department of Chemistry, University of Coimbra, Portugal

Level in national or international classification Master

Dates October 2004 – June 2008

Title of qualification awarded Biophysicist

Principal subjects/occupational skills covered Biophysics; thesis title 'FTIR Spectroscopy – Applications in Studies of Biomembranes Models'

Name and type of organisation providing education and training Faculty of Physics Bucharest, University of Bucharest, Romania

Level in national or international classification Bachelor

Personal skills and competences

Mother tongue(s) Romanian

Other language(s)

Self-assessment
European level ()*

English

French

Portuguese

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	B2	Independent user
B1	Independent user	B2	Independent user	A1	Basic user	A1	Basic user	A2	Basic user
B1	Independent user	B2	Independent user	A1	Basic user	A1	Basic user	A1	Basic user

Social skills and competences - team work: I work in a research team (in average 10 members: university professors, senior research scientists, PhDs, young researchers, students, technicians)
 - good ability to adapt to multicultural environments: during an Erasmus stage I worked in a multicultural Bioelectrochemistry Laboratory, in Pedro Nunes Institute, Coimbra, Portugal

Organisational skills and competences - I was the leader of the Biophysics group during the time I studied at the Faculty of Physics.
 - Member in the Organizing Committee of Scientific Manifestations: **International Student Workshop on Laser Applications 2011, Bran, Romania, 2011**

Computer skills and competences - good command of operating systems: Windows 9x/Me, Windows 2000 Professional, Windows XP, Windows Vista - IT&C diploma from Education and Research Ministry;
 - good command of Microsoft Office (Word, PowerPoint, Excel) - IT&C diploma from Education and Research Ministry;
 - good command of data analysis software (Origin);
 - basic knowledge of graphic design applications (Adobe Photoshop).

Artistic skills and competences Photography (at amateur level).

Driving licence Category B, since 2005.

Additional information

Publications (see Annex 1)
 Contributions to international conferences (see Annex 2)
 Stages abroad in research field (see Annex 3)
 International collaborations (see Annex 4)

PUBLICATIONS

1. Direct modification of bioactive phenothiazines by exposure to laser radiation, Pascu, M.-L., Nastasa, V., Smarandache, A., **Militaru, A.**, Martins, A., Viveiros, M. Boni, M., Andrei, I.R., Pascu, A. Staicu, A., Molnar, J., Fanning, S., Amaral, L., Recent Patents on Anti-Infective Drug Discovery, Volume 6, Issue 2, 2011, Pages 147-157
2. Stability characterization of quinazoline derivative BG1188 by optical methods, **Militaru, A.**, Smarandache, A., Mahamoud, A., Damian, V., Ganea, P., Alibert, S., Pagès, J.-M., Pascu, M.-L., AIP Conference Proceedings, Volume 1364, 2011, Pages 13-23
3. Time Stability Studies of Quinazoline Derivative Designed to Fight Drug Resistance Acquired by Bacteria, **A. Militaru**, A. Smarandache, A. Mahamoud, S. Alibert, J.M. Pagès, M.L. Pascu, Letters in Drug Design & Discovery, Vol. 8, Issue 2, p. 124-129, 2011
4. Quinazoline derivatives are efficient chemosensitizers of antibiotic activity in Enterobacter aerogenes, Klebsiella pneumoniae and Pseudomonas aeruginosa resistant strains, J. Chevalier, A. Mahamoud, M. Baitiche, E. Adam, M. Viveiros, A. Smarandache, **A. Militaru**, M.L. Pascu, L. Amaral, J.M. Pagès, International Journal of Antimicrobial Agents, Vol. 36, Issue 2, p. 164-168, 2010
5. Redox mechanism of lumazine at a glassy carbon electrode, V.C. Diculescu, **A. Militaru**, A. Shah, R. Qureshi, L. Tugulea, A. M. Oliveira Brett, Journal of Electroanalytical Chemistry, Vol. 647, Issue 1, p. 1-7, 2010

ANNEX 2

CONTRIBUTIONS TO INTERNATIONAL CONFERENCES

1. G. Popescu, A.Smarandache, **A.Militaru**, M.L.Pascu, In silico modeling and analysis of EPI activity of laser irradiated drugs, 6th Management Committee Meeting and WGs meeting COST Action BM0701– 6-7 December, Bruxelles, Belgium, 2011 (invited paper)
2. M.L. Pascu, A.Smarandache, J.Kristiansen, **A.Militaru**, V. Nastasa, L. Amaral, Phenothiazines molecular modifications at interaction with modifications at interaction with laser beams, LASER FLORENCE 2011, Florence, 3-6 november 2011 (invited paper)
3. **A. Militaru**, "Efficiency Studies of Phenothiazines and Other Medicines Modified by Exposure to Laser Radiation", 6th Management Committee Meeting and WGs meeting COST Action BM0701– 6-7 December, Bruxelles, Belgium, 2011 (oral presentation)
4. V. Nastasa, **A. Militaru**, L. Amaral, M.L. Pascu, "Molecular modifications of chlorpromazine prepared as solution in micro-droplets form by exposure to laser radiation", International Student Workshop on Laser Applications 2011, Bran, Romania, 31 Mai- 4 Iunie, 2011 (oral presentation)
5. A. Smarandache, **A. Militaru**, V. Nastasa, J. Kristiansen, M.L. Pascu, "Studies of the spectral properties of Phenothiazines", International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, 2011 (oral presentation)
6. **A. Militaru**, A. Smarandache, L. Frunza, J.M. Pagès and M.L. Pascu, "Stability properties of medicines solutions: spectral evidence and wire-like formations", International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, 2011 (oral presentation)
7. **A. Militaru**, S. Alibert, A. Mahamoud, V. Damian, M. Filipescu, M. Enculescu, J. M. Pagès, M. L. Pascu, "Studies on molecular aggregates in quinazoline derivatives solutions by exploring methods", International Student Workshop on Laser Applications 2011, Bran, 31 Mai- 4 Iunie, 2011 (poster)
8. M.L. Pascu, V. Nastasa, **A. Militaru**, A. Staicu, A. Smarandache, S. Fanning, L. Amaral, "Fighting Multiple Drug Resistance of bacteria by treatment with Chlorpromazine modified by exposure to laser radiation", EOSOF 2011, 24 -25May, Muenchen, 2011 (poster)
9. M. L. Pascu, A. Staicu, V. Nastasa, A. Smarandache, **A. Militaru**, A. Pascu, I. R. Andrei, M. Boni, M. Costache, J.M. Pages, J. Barbe, S. Alibert, A. Mahamoud, M. Ferrari, S. Rao, L. Liggieri, L. Amaral, "Laser and Optical Techniques Used to Modify Molecular Structures of Medicines", Progress in studies on ABC transport inhibition Symposium at Chemical Research Center, Hungarian Academy of Sciences, Budapest, Hungary, April 2010 (invited paper)
10. M.L.Pascu, L. Amaral, V.Nastasa, **A. Militaru**, A. Smarandache, "Improvement of phenothiazines efficiency on MDR bacteria, after exposure to laser radiation", Laser Florence 2010, Florence, Italy, 5-6 November 2010, (invited paper)
11. **A. Militaru**, A. Smarandache, A. Mahamoud, V. Damian, S. Alibert, J.M.Pagès, M.L. Pascu, "Time evolution of quinazoline derivative BG1188", International Student Workshop on Laser Applications, Bran, Romania, May 2010 (poster)
12. V. Nastasa, **A. Militaru**, T. Karapantsios, M. Ferrari, K. Samaras, E. Dafnopatidou, I. R. Andrei, L. Ligieri, V. Pradines, R. Miller, M. L. Pascu, "Generation of micro and nano-droplets containing immiscible solutions in view of optical studies", International Student Workshop on Laser Applications, Bran, Romania, May 2010 (oral presentation)
13. I.R. Andrei, V. Nastasa, **A. Militaru**, M. L. Pascu, "Laser Beam Interaction With Microdroplets: a Method to Be Used for Stem Cells Studies?", COST B30 Action NEREPLAS: Stem Cells and Neuroregeneration, February 2010, Haarlem, the Netherlands (poster)
14. **A. Militaru**, A. Smarandache, A. Mahamoud, V. Damian, N. Popescu-Pogrion, S. Alibert, F. Vasiliu, J.M. Pagès, M.L. Pascu, "Nano-formations in Quinazoline Derivative BG1188 in Ultrapure Water Solutions: Amorphous Precipitates, Nanocrystals or Bacteria?", 2010 NanoBiophotonics Summer School at University of Illinois, May – June 2010, Champaign - Urbana, Illinois, USA (poster)
15. **A. Militaru**, A. Smarandache, A. Mahamoud, S. Alibert, J.M. Pagès, M.L. Pascu, "Characterization of stability of BG 1188 compound in ultrapure water and DMSO by spectral studies", COST Action BM0701 – ATENS, July 2010, Bremen, Germany (oral presentation)

16. M.L. Pascu, A. Staicu, V. Nastasa, A. Smarandache, **A. Militaru**, A. Pascu, I.R. Andrei, M. Boni, A. Mahamoud, S. Alibert, J.M. Pagès, L. Amaral, M. Ferrari, S. Rao, L. Liggieri, R. Miller, "Laser Beam Interaction with Beads Containing Medicines Solutions", COST Action BM0701 – ATENS, July 2010, Bremen, Germany (oral presentation)
17. **A. Militaru**, A. Smarandache, A. Mahamoud, V. Damian, N. Popescu-Pogrion, S. Alibert, F. Vasiliu, J.M. Pagès, M.L. Pascu, "Wire-like Formations Produced in BG1188 Solutions: Optical and Electron Microscopy Measurements", 462nd WE Heraeus Seminar: Transport across membranes: Multiple drug resistance, mechanisms and new tools, Bremen, Germany, July 2010 (poster)
18. V. Nastasa, I.R. Andrei, **A. Militaru**, M.L. Pascu, "Interaction of micro-droplets with laser beams", COST P21 "Physics of droplets" WG Meeting, Borovets, Bulgaria, July 2010
19. **A. Militaru**, A. Smarandache, V. Nastasa, A. Mahamoud, V. Damian, N. Popescu-Pogrion, S. Alibert, F. Vasiliu, J.M. Pages, M.L. Pascu, "Stability characterization of quinazoline derivative BG1188 by optical methods", Laser Florence 2010, 5-6 Noiembrie 2010, Florence, Italy (poster)
20. A. Smarandache, R.A. Pascu, **A. Militaru**, M.L.Pascu, "Modifications of the medicines molecular structures by bulk exposure to optical radiation", Laser Florence 2009, Florenta, Italia, November 2009 (oral presentation)
21. **A. Militaru**, A. Smarandache, A. Mahamoud, S. Alibert, M.L.Pascu, J.M.Pages, "Stability studies performed on quinazoline derivative BG1188", Second Annual Conference of COST Network BM0701 - ATENS "Antibiotic transport and efflux: new strategies to combat bacterial resistance", December 2009, Dublin, Ireland, December 2009

ANNEX 3

STAGES ABROAD IN RESEARCH FIELD

Period	Country	Purpose of visit
February - June, 2009	Portugal	Erasmus stage ¹
June 2011	Ireland	Research stage ²

¹performed at Faculty of Science and Technology, Department of Chemistry, University of Coimbra, Portugal

²performed at School of Agriculture, Food Science & Veterinary Medicine, University College Dublin, Ireland, subject "Efficiency Studies of Phenothiazines and Other Medicines Modified by Exposure to Laser Radiation"

ANNEX 4

INTERNATIONAL COLLABORATIONS

1. Member of the European Network COST BM0701 "Antibiotic Transport and Efflux: New Strategies to combat bacterial resistance (ATENS)"
2. Member of the European Network COST P21 "Physics of Droplets"

Janurary, 2012