



**Europass
Curriculum Vitae**



Personal information

First name / Surname

ZAMFIRACHE MARIA - MAGDALENA

Address

Cucu Street, no. 21, Block 303, Sc. A, 3rd floor, apartment 9, Iasi, ROMANIA

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magda@uaic.ro; magda_zamfirache@yahoo.com

Nationality

Romanian

Date of birth

26.06.1955

Gender

female

**Desired employment /
Occupational field**

“Alexandru Ioan Cuza” University from Iasi, Faculty of Biology, Plant Biology Laboratory,
Morpho-anatomy and Plant physiology Department / Education and research

Work experience

Date

2005 to present

Occupation or position held

Professor PhD

**Main activities and
responsibilities**

Scientific research and educational activities

**Name and address of employer
Type of business or sector**

“Alexandru Ioan Cuza” University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Date

2001 - 2005

Occupation or position held

Associate Professor PhD

**Main activities and
responsibilities**

Scientific research and educational activities

**Name and address of employer
Type of business or sector**

“Alexandru Ioan Cuza” University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Date

1994 – 2001

Occupation or position held

Lecturer PhD.

**Main activities and
responsibilities**

Scientific research and educational activities

**Name and address of
employer**

“Alexandru Ioan Cuza” University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Type of business or sector

Date 1991-1994

Occupation or position held Assistant

Main activities and responsibilities Scientific research and educational activities

Name and address of employer "Alexandru Ioan Cuza" University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Type of business or sector

Date 1986-1991

Occupation or position held Biologist and researcher

Main activities and responsibilities Scientific research and educational activities

Name and address of employer "Alexandru Ioan Cuza" University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Type of business or sector

Date 1980-1986

Occupation or position held Biologist

Main activities and responsibilities Coordination of the bio-technological production of antibiotics

Name and address of employer "Antibiotice Iasi" Company, Valea Lupului Street, no. 1, Iasi, ROMANIA

Education and training

Date 1992 – 1999

Title of qualification awarded Doctor in Biology, Botany Specialization, "Alexandru Ioan Cuza" University from Iasi, PhD diploma, series: R, number: 0005077.

Principal subjects/occupational skills covered Biology – Botany / knowledge about morphology, anatomy and physiology of symbiotic associations at superior plants.

Name and type of organization providing education and training "Alexandru Ioan Cuza" University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Level in national or international classification

Date 1979-1980

Title of qualification awarded Bachelor in Medical Biology Specialization ("Alexandru Ioan Cuza" University from Iasi, Faculty of Biology, Geography and Geology, Biology Section), Certificate of Specialized Studies of Human Biology – number 3231.

Principal subjects/occupational skills covered Biology / specific knowledge about human medical biology used in medical screening,

Name and type of organization providing education and training "Alexandru Ioan Cuza" University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA

Level in national or international classification

Date 1975 – 1979

Title of qualification awarded Bachelor in Biology Specialization ("Alexandru Ioan Cuza" University from Iasi, Faculty of Biology, Geography and Geology, Biology Section), Merit award – License studies – number 323480.

Principal subjects/occupational skills covered	Biology / specific knowledge about general biology, botany, zoology, ecology, biochemistry, microbiology, genetics and industrial biotechnologies. School psychology, pedagogy, methodology and specific knowledge to practice as a teacher
Name and type of organization providing education and training	"Alexandru Ioan Cuza" University from Iasi, Carol I Street, no. 20 A, zip code 700505, Iasi, ROMANIA
Level in national or international classification	
Date	1969 – 1973
Title of qualification awarded	Baccalaureate, High school no. 1 from Dorohoi, Botosani county, Baccalaureate Diploma, series H, number 72996.
Principal subjects/occupational skills covered	Specific domains for the high school cycle
Name and type of organization providing education and training	High school no. 1, Dorohoi, Botosani county, ROMANIA

Personal skills and competences

Organizational skills and competences

- Member of the Senate of the "Alexandru Ioan Cuza" University from Iasi, 2008 – 2011;
- Member of the Board of Science Department of the "Alexandru Ioan Cuza" University, 2008 – 2011;
- Member of the Board of the Faculty of Biology, 1996-2000; from 2003 to the present;
- Director of the Biology Department – Faculty of Biology, 2008 – 2011;
- Head of Plant Biology Laboratory at the Faculty of Biology, 2008 – 2011;
- Member of the Council Bureau of the Biology Department – Faculty of Biology, 2008 – 2011;
- Member of the Council Bureau of the Research Department – Faculty of Biology, 2008 – 2011;
- Member of the Council Bureau of the Board from Faculty of Biology, 2003-2011;
- Member of the Committee for Scientific Research from "Alexandru Ioan Cuza" University, 2003-2007;
- Vice - Dean of the Faculty of Biology, responsible for the scientific research and PhDs, 2003-2007;
- Member of the Bureau of Plant Biology Department, 2003 – 2007;
- Member of the Scientific Council of the "Anastase Fatu" Botanical Garden, Iasi, 2004 - 2007;
- Member of the Editorial Collective for the journal: *Romanian Journal of Biology. Plant Biology*, Romanian Academy, Bucharest, starting in 2006;
- Member of the Editorial Collective of the journal *Scientific Annals of the "Alexandru Ioan Cuza" University from Iasi, New Series, Sect. II – a, Plant Biology*, Iasi, starting in 2007;
- Member of the Editorial Collective of the journal *Oltenia. Researches and Communications. Natural Sciences Section*. Oltenia Museum, Craiova, starting in 2010;
- Member of the International Committee for the program: *Proceedings of the 2nd International Conference on Waste Management, Water Pollution, Indoor Climate (WWAI'08)*, Corfu, Greece, 2008;
- Member of the Organizational Committee for The Annual Session of Scientific Communications – "Alexandru Ioan Cuza" University, 2003, 2004, 2005, 2008, 2009, 2010 and 2011 editions.

Technical skills and competences

Abilities to use the laboratory equipment typical for the research in the applied plant biology (microscopes, spectrophotometers, equipment to measure and record the specific physiologic parameters of plants).

Computer skills and competences

Word, Excel, PowerPoint.

Other skills and competences

- Member of the National Council for the Recognition of Degrees, Diplomas and University Certificates (CNATDCU) - Commission of Biology and Biochemistry, starting in 2012;
- Responsible for evaluation of Biology Field on the National Research Quality Assessment in Universities Platform and increasing the visibility by scientific publishing POSDRU/6/1.5/g/14722 - SISEC, 2011;
- Member of the working group of experts from the "Alexandru Ioan Cuza" University from Iasi in Sectorial Operational Programme for Human Resources Development 2007-2013 - Project

Doctoral Studies in Romania - Organizing Doctoral Schools POSDRU/5/1.5/5/1, 2010;

- Expert assessor in CNCIS - UEFISCSU, 2003 – 2011;
- Expert assessor in the Romanian Agency for Quality Assurance in Higher Education – ARACIS, 2008 – 2010;
- Expert assessor in RELANSIN Programme, 2004;
- Member of working group to achieve Contract no. 257/28.09.2010, POS CCE O 2.2.1, ID 901 - Integrated Centre for Studies in Environmental Science for Northeast Development Region (Project Structural Funds) CERNESIM acronym, 2010 - 2012.

Visiting professor at prestigious universities

Abroad

- Invited professor at the Universitat Politècnica de València, Spain, 7-15 March 2011, travel financed by Project - "Innovation and development in doctoral programs and graduate research university to adapt to the needs of knowledge society." Project POSDRU/21/1.5/G/14722.

Didactic activities :

Courses taught:

- Plant Physiology;
- General Plant Physiology;
- Plant ecophysiology;
- Photosynthesis;
- Nutritional interrelations in living world (the section referring to kingdom Plantae);
- Food Micro biota and incidence of contaminated microorganisms (Master);
- Environmental Policies and Strategies (Master);
- Symbiosis-engine of development in the living world (Master);
- Levels of integration in plants and animals (section referring to vegetal organisms) (Master);
- Development of plant and animal organisms under stress (section referring to vegetal organisms) (Master);
- Systems and mechanisms of self-regulation in plants (Master);
- Evolutionary Strategies in the plant world (Doctoral School);
- Biotic interactions (Doctoral School).

Scientific activity:

Areas of competence

- vegetal physiology;
- microbial and vegetal biotechnology.

Published scientific research:

- Author (as unique author or in collaboration with) of:
 - **2** monographs;
 - **3** college courses;
 - **2** guides for practical projects.
- Author (as unique author or in collaboration with) of **287 articles and original studies**:
 - **70 articles** in international journals (ISI, BDI indexed journals specific to the field, making a selection process);
 - **76 articles** in international specialized journals or in the volumes of the international scientific exhibitions with reviewers (ISSN or ISBN);
 - **141 articles** in Romanian journals acknowledged by CNCIS, journals of the Romanian Academy, volumes published in Romania of national and international conferences with reviewers.

Patents:

- Co-author (STEFANIA SURDU, ZENOVIA OLTEANU, **MARIA-MAGDALENA ZAMFIRACHE**) to the patent no A-00349/27.03.2002-05-14 with the title "**Utilisation de facteurs d'augmentation pour la modification du potentiel biosynthétique chez *Claviceps purpurea* Fr.(Tul.)**", silver medalist at the Invention Salon in Geneva, 2002.

Scientific research contracts:

Participation in **35** projects of research-development-innovation by contract / grant:

- **coordinator in research contracts with Romanian funds – 9;**
- **collaborator to research contracts with Romanian funds – 24;**
- **collaborator to European research activity – 2.**

PhD leader in Fundamental Field Natural Sciences, Field Biology since 2008

Coordinator of doctoral and postdoctoral research internships (grants AUF), since 2010

Participation at scientific events

National participation

- The Scientific Session „*News in Plant Biology*” –Cluj Napoca –Jibou, 2012;
- The Scientific Symposium „*Conservation of plant diversity in situ and ex situ*”, Biology Faculty, “Alexandru Ioan Cuza” University from Iasi, the Botanical Garden, „A. Fătu” Iasi, 2011;
- The Scientific Communications Session of the Biology Faculty, “Alexandru Ioan Cuza” University from Iasi, “*Biology in Darwin’s anniversary year*”, October 2010;
- The National Symposium “*The medicine – from concept to use*”, Iasi, May 2009
- The Scientific Session, Biology Faculty, “Alexandru Ioan Cuza” University from Iasi, the Botanical Garden, „A. Fătu” Iasi editions 1986 -2010;
- The Academic days of Arad, the 18th edition, Arad, 2008;
- The National Conference of Phytotherapy, the IVth edition, Iasi, 2008;
- The Session of Scientific Communications of the Biology Faculty, “Alexandru Ioan Cuza” University from Iasi, “*Biochemistry and molecular biology – present and future*” Iasi, 24-25th October 2008;
- The National Symposium “*The human impact on the diversity of plants*”, Galanesti – Radauti, Suceava county”, 2008;
- The National Scientific Communications Session of the Biology Faculty and of the Botanical Garden “Dimitrie Brandza”, Bucharest, editions 1998-2006, 2008, 2010 and 2012;
- The Annual Scientific Symposium “*Actual and future problems in horticulture from Moldavia*” – The Agricultural Sciences and Veterinary Medicine University “Ion Ionescu de la Brad” from Iasi – Faculty of Horticulture, editions from 1997 to 2003 and 2007;
- The Session of Scientific Communications of the County Museum Pitesti, Arges county, editions 2002 and 2006;
- Scientific Session of the University from Bacau, editions 2000, 2001 and 2006;
- The Session of Scientific Communications of The Agricultural Sciences and Veterinary Medicine University from Bucharest, Faculty of Horticulture, edition 2003;
- The Session of Scientific Communications of The National Institute of Research – Development for Biologic Sciences, The Biological Research Institute Cluj-Napoca, edition 2002;
- The National Scientific Session hosted by “Valahia” University Targoviste – The Faculty of Environment Engineering and Biotechnology, edition 2000;
- The National Symposium of Industrial Microbiology and Biotechnology – editions Iasi (1988, 1998, 2005) and Galati, 1989;
- The International Scientific Symposium “*Agriculture, real chance of economic recovery*” – The Agricultural Sciences and Veterinary Medicine University “Ion Ionescu de la Brad”, Iasi, Faculty of Agronomy, editions from 1996 to 2002;
- The Symposium “*140 years from the foundation of the first Botanical Garden in Romania*” – Iasi, edition 1996;
- The National Congress of Biology “Emil Racovita” – Iasi, edition 1992;
- The Session of Scientific Communications organized by the “Antibiotice Company”, Iasi, edition 1985.

International participation:

- The Plant Biology Congress Freiburg 2012 - jointly organized by FESPB and EPSO, 29 July-3 August, 2012, Germany;
- The XIIIth International Botanical Congress Melbourne, Australia, 23-30 July 2011;
- The IXth International Congress of the Scientific Society of Geneticists and Breeders of the Republic of Moldova, Chişinău, October, 21-22, 2010;
- The International Conference Natural and artificial ecosystems in the Someş – Criş – Mureş -Tisa river basin, Macea, Arad, Romania, 7-8 May 2010;
- The 22nd New Philologists Symposium - Effectors in Plant-Microbe Interactions, INRA Versailles Research Centre, Paris, France, September 13-16, 2009;
- The 57th International Congress and Annual Meeting of the Society For Medicinal Plant and Natural Product Research Geneva, 16-20 August 2009;
- The 14th Pan-Hellenic Pharmaceutical Congress, Athena, 9-11 May 2009;
- The XIIth International Symposium - Magnesium Research, Iasi, Romania, 22-25 September 2009;
- The XIIth International Congress of Bacteriology and Applied Microbiology; The XIIth International Congress of Mycology, Istanbul, Turkey, 5-9 August 2008;
- The 3rd International Symposium of Ecologists of The Republic of Montenegro ISEM 3, 8-12 October 2008;
- The World Scientific and Engineering Academy and Society International Conference on Waste management, water pollution, air pollution, indoor climate (WWAI) Arcachon France, 14-16 October 2007;
- The 3rd International Sea buckthorn Association Conference Quebec, Canada, 12-16 August, 2007;
- The International Scientific Conference Modern Management of Mine Producing, Geology and Environmental Protection SGEM Albena, Bulgaria, editions 2005, 2006 and 2007;
- The International Symposium on Chamomile Research, Development and Production, Presov University, Slovakia, 2006;
- The 4th Balkan Botanical Congress Sofia, Bulgaria, 20-26 June 2006;
- The 4th Conference on Medicinal and Aromatics Plants of Southeast European Countries, Iasi,

- Romania, edition 2006.
- The 7th International Botanical Congress Viena, Austria 17-23 July 2005;
- New Perspectives in Controlled Release, Mediterranean Meeting of Pharmaceutical Products, Athena, Greece, editions 2001 and 2005;
- The 10th International Conference on Magnetic Fluids, Guaruja- Sao Paulo Brazil, edition 2004;
- The 1st Symposium of Ecologists of Crne Gore, The Republic of Montenegro, edition 2004;
- The 3rd Conference on Medicinal and Aromatics Plants of Southeast European Countries, Nitra, Slovakia, edition 2004;
- The 2nd Conference On Medicinal and Aromatic Plants of Southeast European Countries – Chalkidiki, Greece, edition 2002;
- The International Conference on Ecological Protection of the Planet Earth and Environmental Innovation Exhibition Xanthi, Greece, edition 2001;
- Scientific Conference of Teachers – Science, Chisinau, Republic of Moldova, edition 1993;
- The 11th EWRS (European Weed Research Society) Symposium, Basel, Switzerland, edition 1999.

Member of scientific organizations and special committees

Romanian scientific organizations:

- Society of Biological Sciences;
- "Stefan Lupascu" foundation for science and culture (founding member).

Scientific organizations in other countries:

- Association for Medicinal and Aromatic Plants of Southeast European Countries (AMAPSEEC);
- European Federation of Plant Biology Organizations (FESPB);
- International Society of Cellular Biology;
- Society for Medicinal Plant Research.

Awards and distinctions:

- "EMANOIL TEODORESCU" Award from the Romanian Academy in 2002, for the paper "**Symbiosis in the living world**" published in 2000 in collaboration with Prof. dr. CONSTANTIN TOMA PhD, member of the Romanian Academy.
- **Silver medal**, in collaboration (STEFANIA SURDU PhD, ZENOVIA OLTEANU PhD, **MARIA-MAGDALENA ZAMFIRACHE PhD**) at the International Invention Salon in Geneva, 3rd of May 2002, for the invention: "**Utilisation de facteurs d'augmentation pour la modification du potentiel biosynthétique chez *Claviceps purpurea* Fr. (Tul.)**".

Training courses

National:

- Francophone summer school of Biochemistry "**Glycosciences et glycotecnologies**" organized by "Alexandru Ioan Cuza" University, Iasi and the High Education and Research Ministry from France, Iasi, July 1995.

International:

- Information internship in Chisinau, Moldavian Republic – **Plant Physiology Institute**, June 1996.
- Specialization internship in the Hungarian Republic at The "**Eötvös Loránd**" **University** in Budapest - Plant Physiology Institute Department, November 1992 – June 1993.
- Specialization internship in Deutschland at **University of Jena** (as a student), July-August 1978.

LIST OF SCIENTIFIC PAPERS (Selective)

I. PhD THESIS:

MORPHO-ANATOMICAL AND MICROBIOLOGICAL RESEARCH REGARDING THE SYMBIOSIS IN SUPERIOR PLANTS, sustained in 25.03.1999, Domain: **BIOLOGY - BOTANY**, under the leadership of **Professor PhD. Constantin TOMA**, member of the Romanian Academy, institution - **University "Alexandru Ioan Cuza" from Iasi**.

II. LECTURES, MONOGRAPHS:

A. UNIVERSITY COURSES:

- **MARIA-MAGDALENA ZAMFIRACHE, 2007. Plant Physiology**. Published for Distance Education, Faculty of Biology, University "Alexandru Ioan Cuza" from Iasi, on CD, 150 pages.
- **MARIA-MAGDALENA ZAMFIRACHE, 2001. Plant Physiology** (lecture notes). Publishing house "Alexandru Ioan Cuza" University from Iasi, 230 pages.

- CONSTANTIN TOMA, **MARIA-MAGDALENA ZAMFIRACHE**, NAELA COSTICĂ, IRINA GOSTIN, 1999. **Plant biology**. Published in collaboration with the Faculty of Physics Education, Curs for Distance Education, University "Alexandru Ioan Cuza" from Iasi, ISSN: 1221-9363, 160 pages.

B. PRACTICAL LABORATORY MANUALS:

- **MARIA MAGDALENA ZAMFIRACHE**, ZENOVIA OLTEANU, ANIȘOARA STRATU, RAMONA GALEȘ, 2008. **Plant physiology - Practical guide**, Publishing house "Alexandru Ioan Cuza" University from Iasi, on CD, 138 pages.
- **MARIA-MAGDALENA ZAMFIRACHE**, ZENOVIA OLTEANU, ALEXANDRINA MURARIU, ANIȘOARA STRATU - coordinator Prof. univ. dr. T. CHIFU, 1997. **Fundamentals of environmental protection - Practical textbook**. Publishing house "Alexandru Ioan Cuza" University from Iasi, 230 pages.

C. MONOGRAPHS:

- **MARIA-MAGDALENA ZAMFIRACHE**, 2005. **Plant Physiology**. Vol I., Azimuth Publishing, Iasi, ISBN: 973-87276-9-3, 195 pages.
- **MARIA-MAGDALENA ZAMFIRACHE**, CONSTANTIN TOMA, 2000. **Symbiosis in the living world**. Publishing "Alexandru Ioan Cuza" University from Iasi, ISBN: 973-9312-61-6, 290 pages.

III. SCIENTIFIC ARTICLES / STUDIES PUBLISHED

1. Scientific articles published in extenso in journals Web of Science

- IRINA BOZ, AURELIA DOBRESCU, **MARIA-MAGDALENA ZAMFIRACHE**, CONSTANTIN TOMA, DUMITRU COJOCARU, 2013. **Data regarding the essential oils from seven populations of *Thymus balcanus* Borbás**. *Carpathian Journal of Earth and Environmental Sciences*, 8 (1), ISSN 1842-4090: 217- 222.
- OLTEANU Z., TRUTA E., OPRICA L., **ZAMFIRACHE M.M.**, ROSU C.M., VOCHITA G., 2013. **Copper-induced changes in antioxidative response and soluble protein level in *Triticum aestivum* cv. *Beti* seedlings**. *Romanian Agricultural Research*, 30, first online (30 January 2013), *DII 2067-5720 RAR 2012-190*, 8 pp.
- ELENA TRUTA, GABRIELA VOCHITA, CRAITA MARIA ROSU, **MARIA MAGDALENA ZAMFIRACHE**, ZENOVIA OLTEANU, LACRAMIOARA OPRICA, 2013. **Karyotype traits in Romanian selections of edible blue honeysuckle**. *Turkish Journal of Biology*, 37 (1), (DOI:10.3906/biy-1205-28), ISSN (print):1300-0152, E-ISSN: 1303-6092: 60-68.
- MARIUS-NICUȘOR GRIGORE, CONSTANTIN TOMA, **MARIA-MAGDALENA ZAMFIRACHE**, MONICA BOSCAIU, ZENOVIA OLTEANU, DUMITRU COJOCARU, 2012. **Ecological, anatomical halophytes with c4 photosynthesis: discussing adaptive features in endangered ecosystems**. *Carpathian Journal of Earth and Environmental Sciences*, 7 (2) ISSN 1842-4090, (online): 261-268.
- TRUTA E., **ZAMFIRACHE M.M.**, ROSU C.M., OLTEANU Z., MIHAI C., GHERGHEL D., 2011. **Cytogenetic effects induced by 2,4-d and kinetin in radish and common bean root meristems**. *Romanian Agricultural Research* 28/2011, ISSN 1222-4227(print), ISSN 2067-5720 (online): 207-215.
- TRUTA E., VOCHITA G., ROSU C.M., **ZAMFIRACHE M.M.**, OLTEANU Z., 2011. **Evaluation of roundup-induced toxicity on genetic material and on length growth of barley seedlings**. *Acta Biologica Hungarica*, 62 (3), (DOI: 10.1556/ABiol.62.2011.3.8), ISSN 0236-5383: 290–301.
- TRUTA E., CAPRARU G., ROSU C.M., **ZAMFIRACHE M.M.**, OLTEANU Z., MANZU C., 2011. **Morphometric pattern of somatic chromosomes in three Romanian seabuckthorn genotypes**. *Caryologia*, 64 (2), ISSN 0008-7114: 187-194.
- **ZAMFIRACHE M.M.**, BURZO I., GOSTIN I., STEFAN M., PADURARIU C., OLTEANU Z., BADEA M.L., LAMBAN C., TRUTA E., IVANESCU L., COJOCARU D., 2011. **Micromorphological traits and biochemical pattern of *Perovskia atriplicifolia* Benth., plant with phytoremediative potential**. *Carpathian Journal of Earth and Environmental Sciences*, 6 (2), ISSN 1842-4090: 261-268.
- CRAITA MARIA ROSU, CIPRIAN MANZU, ZENOVIA OLTEANU, LACRAMIOARA OPRICA, ADRIAN OPREA, ELENA CIORNEA, **MARIA MAGDALENA ZAMFIRACHE**, 2011. **Several Fruit Characteristics of *Rosa* sp. Genotypes from the Northeastern Region of Romania**. *Not. Bot. Horti Agrobo*, 39 (2), p-ISSN: 0255-965X; e-ISSN: 1842-4309: 203-208.
- TRUTA E., CAPRARU G., SURDU S., **ZAMFIRACHE M.M.**, OLTEANU Z., ROSU C.M., OPRICA L., 2010. **Karyotypic studies in ecotypes of *Hippophaë rhamnoides* L. from Romania**. *Silvae Genetica*, 59 (4), ISSN 0037-5349: 175-182.
- **MARIA-MAGDALENA ZAMFIRACHE**, LACRAMIOARA IVANESCU, ZENOVIA OLTEANU, RAMONA CRINA GALEȘ, 2008. **Morpho-anatomical and physiological effects of the industrial polluting agents from Moldavian industrial areas – Romania, on *Populus tremula* L.** *International Journal of Energy and Environment*, 2 (1), , ISSN:1109-9577: 93-100.
- **MARIA-MAGDALENA ZAMFIRACHE**, LACRAMIOARA IVANESCU, ZENOVIA OLTEANU, 2008. **Effects of industrial pollution on species of *Populus alba* L. from Moldavian areas – Romania**. *New Aspects of Heat Transfer, Thermal Engineering and Environment Part II Proceedings of the 6th IASME/WSEAS International Conference on Heat Transfer, Thermal Engineering and Environment (HTE'08) Published by WSEAS Press, Rhodos Greece*, ISBN: 978-960-6766-97-8; ISSN:1790-5095: 342-347.
- ZENOVIA OLTEANU, **MARIA MAGDALENA ZAMFIRACHE**, LĂCRĂMIOARA IVĂNESCU, 2007. **Researches regarding the physiological response induced by atmospheric pollutants on *Gymnosperm* species in the industrial areas of Romania**. *International Journal of Energy and Environment*, 1 (1), ISSN: 1109-9577: 85-89.

- **MARIA-MAGDALENA ZAMFIRACHE**, LACRAMIOARA IVANESCU, ZENOVIA OLTEANU, 2007. **Physiological modifications induced by atmospheric pollutants on *Gymnosperm* species in the industrialized areas of Romania.** *International Journal of Energy and Environment*, 1 (1), ISSN: 1109-9577: 90-94.

2. Scientific articles published in extenso in journals indexed BDI:

- TRUTA E., OLTEANU Z., ROSU M.C., CIORNEA E., **ZAMFIRACHE M.M.**, OPRICA L., ASTAFEI M., 2012. **Some aspects of chemophenotype heterogeneity in *Lonicera*, *Cornus* and *Rosa* genotypes in relation to chromosome constitutio.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, Sect. II a. Genetics and Molecular Biology*, XIII (2), ISSN: 1582-3571:73-80.
- TRUTA E., **ZAMFIRACHE M.M.**, OLTEANU Z., 2011. **Caffeine induced genotoxic effects in *Phaseolus vulgaris* L. and *Raphanus sativus* L.** *Botanica Serbica* 35(1), ISSN 1821-2158: 49-54.
- ANDRO ANCA-RALUCA, BOZ IRINA, PĂDURARIU CLAUDIA, ATOFANI DOINA, COISIN MAGDA, **ZAMFIRACHE MARIA-MAGDALENA**, 2011. **Comparative biochemical and physiological research on taxa of *Mentha* L.**, *J. Plant Develop.*, 18, ISSN: 2065-3158; e-ISSN: 2066-9917: 41-45.
- ADUMITRESEI LIDIA, **ZAMFIRACHE MARIA MAGDALENA**, OLTEANU ZENOVIA, BOZ IRINA, 2011. **Observations on the foliar assimilating pigments content for wild and garden roses.** *J. Plant Develop.*, 18 ISSN: 2065-3158; e-ISSN: 2066-9917: 47-54.
- TRUTA E., OLTEANU Z., **ZAMFIRACHE M.M.**, CIORNEA E., OPRICA L., VOCHITA G., 2011. **Considerations on the relationship between chromosome constitution and biochemical phenotype in five ecotypes of seabuckthorn.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, Sect. II a. Genetics and Molecular Biology*, XII (2), ISSN: 1582-3571: 65-74.
- OLTEANU Z., OPRICA L., TRUTA E., **ZAMFIRACHE M.M.**, 2011. **Behaviour of antioxidative enzymes and of soluble protein in wheat seedlings after lead-induced stress.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, Sect. II a. Genetics and Molecular Biology*, XII (2), ISSN: 1582-3571: 75-87.
- CRĂIȚA-MARIA ROȘU, ZENOVIA OLTEANU, ELENA TRUȚĂ , ELENA CIORNEA, CIPRIAN MÂNZU, **MARIA-MAGDALENA ZAMFIRACHE**, 2011. **Nutritional value of *Rosa* spp. L. and *Cornus mas* L. fruits, as affected by storage conditions.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, Sect. II a. Genetics and Molecular Biology*, XII (4), ISSN: 1582-3571: 147-157.
- ANIȘOARA STRATU, **MARIA MAGDALENA ZAMFIRACHE**, ALEXADRINA MURARIU, ZENOVIA OLTEANU, LĂCRĂMIOARA OPRICĂ, CĂTĂLIN TĂNASE, VASILICĂ CLAUDIU CHINAN, CIPRIAN BÎRSAN, 2011. **Physiological and biochemical aspects in the macromycetes species collected from Călimani National Park (The Oriental Carpathians).** *Annals of the "Alexandru Ioan Cuza" University from Iasi, Sect. II a. Genetics and Molecular Biology*, XII (4) ISSN: 1582-3571: 157-164.
- IRINA NETA GOSTIN, **MARIA MAGDALENA ZAMFIRACHE**, M. STEFAN, 2011. **Anatomical and micromorphological aspects at *Ardisia crenata* Sims.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, New series, Sect. II a. Plant Biology*, LVII (1), ISSN: 1223-6578: 5-12.
- **MARIA-MAGDALENA ZAMFIRACHE**, CLAUDIA PĂDURARIU, I. BURZO, ZENOVIA OLTEANU, IRINA BOZ, CARMEN LAMBAN, 2011. **Research regarding the chemical composition of the volatile oil of some taxa belonging to the genus *Ocimum*.** *Annals of the "Alexandru Ioan Cuza" University from Iasi, New series, Sect. IIa. Plant Biology*, LVII (1), ISSN: 1223-6578: 31-34.
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- **MARIA MAGDALENA ZAMFIRACHE**, LĂCRĂMIOARA IVĂNESCU, 2007. **The effect air pollutants upon physiological processes of the horse chestnut's leaves (*Aesculus hippocastanum* L.).** *Proceedings of the Modern Management of Mine Producing, Geology and Environmental Protection Albena, Bulgaria*, ISBN 10: 954-91818-1-2: 159-165.
- LĂCRĂMIOARA IVANESCU, **MARIA MAGDALENA ZAMFIRACHE**, 2007. **Histo-anatomical changes of the horse chestnut's leaves (*Aesculus hippocastanum* L.) under the influence of atmosphere pollutants.** *Proceedings of the Modern Management of Mine Producing, Geology and Environmental Protection Albena, Bulgaria*, ISBN 10: 954-91818-1-2: 166-169.

IV. PATENTS

- Coauthor (ȘTEFANIA SURDU, ZENOVIA OLTEANU, **MARIA-MAGDALENA ZAMFIRACHE**) at patent no. A-00349/27.03.2002-05-14 titled „Utilisation de facteurs d'augmentation pour la modification du potentiel biosynthétique chez *Claviceps purpurea* Fr. (Tul.)” silver medal at the Salon of Inventions in Geneva in 2002.

V. RESEARCH PROJECTS

A. – COORDINATOR IN RESEARCH CONTRACTS WITH INTERNAL FUNDING

- **Myxobacteria, thermoactinomycete and other microorganisms producing biologically active substances - Phase for 1991 -** Beneficiary Ministry of Education and Science.
- **The biology of symbiotic and parasitic organisms in vivo and in vitro - Phase 1991 -** Beneficiary Ministry of Education and Science.
- **Research regarding the biology of some forms of nutritional heterotrophic interrelations in the living world - Phases 2000, 2001 and 2002,** Beneficiary National Agency for Science, Technology and Innovation.
- **Research regarding the resistance of wild and cultivated plant species under the action of stress factors - Phase 2001.** Beneficiary Ministry of Education and Science.
- **Complementary research regarding the response of some wild and cultivates species of plants under stressful environmental factors: climate, soil, biological and pollutants - Phase 2003, 2004 and 2005.** Beneficiary Ministry of Education and Science.
- **Upgrading technology for combat pests and diseases at pear by studying the effectiveness of pesticide in relation to their influence on physiological and biochemical processes in plants, in order to obtain high quality products,** responsible for phases 2003 and 2004 from the Faculty of Biology, Contract PNCDI RELANSIN, Project coordinated by Institute of Biological Science (2003-2004).
- **Optimization of biosynthetic efficiency of some strains of *Claviceps purpurea* (Fr.) Tul. by somatic hybridization biotechnology and establish new areas of biomedical and biopesticides use of ergoline alkaloids -** responsible for phases 2002 and 2004 from the Faculty of Biology, Contract PNCDI for BIOTECH Project coordinated by the Institute of Biological Science (2002-2004).
- **The complex study of phyllosphere of some plant species grown in the Botanical Garden Iasi - a premise to substantiate new opportunities in care and protection of anthropogenic ecosystems,** beneficiary Romanian Academy (2007-2008).
- **The complex study of phyllosphere of some plant species from Botanical Garden Iasi collections,** Project PN II IDEI Program, CNCSIS code 2100 (2009-2011).

B. COLLABORATE IN RESEARCH CONTRACTS WITH INTERNAL FINANCING

- **Research to establish a method for analysis and control of inoculum and doses of *Claviceps purpurea* (Fr.) Tul. used in infestation in field crops of rye, to produce ergot - Phases 1986 and 1987 -** beneficiary Company "Plafar" Botosani.
- **Research on the selection, improvement and development of new valuable strains for breeding, to produce sclerotia of *Claviceps purpurea* (Fr.) Tul. from the ergotoxine (ergocristine, ergocornine, ergocriptine) and ergotamine, testing them by artificial infection in field under pathogenic vigor and content of alkaloids - Phase 1987 -** beneficiary Enterprise "Plafar" Botosani.
- **Research regarding the variability of biosynthetic capacity of in ergot alkaloids, depending on the preparation technology of infestation material - Phase 1987 -** beneficiary Company "Plafar" Botosani.
- **Behavior of the species *Claviceps purpurea* (Fr.) Tul. in submerged culture conditions on different formulas broth - Phase 1988 -** beneficiary Biological Research Center Cluj-Napoca
- **Study regarding the wastewater chemically impure by microbiological methods - Phase 1990 –** Industrial Enterprise of Synthetic Fiber Iasi.
- **Research regarding the characterisation of wastewater decolorated for recycling - Phase 1990-** Industrial Enterprise of Synthetic Fiber Iasi.
- **Research on parameters optimization of aeration in industrial producer of penicillin, in view of achieving a suitable energy – Phase 1991 -** beneficiary Antibiotice Enterprise Iasi.
- **Eco-physiological research on plants from spontaneous and cultivated flora (the influence of some physical, chemical and biological factors on different physiological processes) – Phase 1994 –** beneficiary Ministry of Education and Science.
- **Physiological research on plants from spontaneous and cultivated flora with food utility – Phase -1994 -** beneficiary Ministry of Education and Science.
- **Morpho-anatomical, physiological and biochemical research on spontaneous and cultivated plants in normal and altered conditions under the effect of biotic and abiotic factors (pollutants, fertilizers, pesticides, radiation, retardants, etc.) – Phases 1996,1997 and 1998 -** beneficiary Ministry of Education and Science.
- **Histo-anatomical, physiological and biochemical research in comparative approach of ontogenetic process in vivo and in vitro in some species of medicinal plants – Phases 2000, 2001, 2002 –** beneficiary National Agency for Science, Technology and Innovation.
- **Research regarding the phloristic and phytocenologic biodiversity from Bârlad Plateau and Covurlui Plain – Phase 2001 -** beneficiary Ministry of Education and Science.
- **Research regarding the interaction of microorganism - host plant in some forms of parasitism and symbiosis, Phases 2001 and 2002,** beneficiary National Agency for Science, Technology and Innovation.
- **Research regarding the biology of some woody species from habitats of Moldova, in normal conditions and modified conditions under the effect of biotic and abiotic factors – Phases 2003 and 2004,** Beneficiary Romanian Academy.
- **The impact of environmental damage on the structure and diversity of mycorrhizas of some *Quercus* species from Moldova - Phases 2003, 2004 and 2005,** beneficiary Ministry of Education and Science
- **Biosynthetic yield optimization of some strains of *Claviceps purpurea* by somatic hybridization biotechnology and establish of new areas of biomedical and biopesticides use of ergoline alkaloids. Contract research PNCDI - BIOTECH, 2003 - 2005,** beneficiary Ministry of Education and Science

- The use of morphological, structural, ultrastructural and biochemical biomarkers in evaluation of human impact on biodiversity Ceahlau National Park and surrounding area. Contract research program CEEEX - MENER, 2005-2008, beneficiary Ministry of Education and Science
- Microremediation of polluted soils from areas considered critical from ecological point of view. GRANT CNCSIS, 2006-2008, beneficiary Ministry of Education and Science
- Biotechnological exploitation of productive potential at *Hippophae rhamnoides* ssp *carpathica* by complex characterization of varieties, source of organic crop for sustainable agriculture. Contract research CEEEX-109 - BIOTECH, 2006-2008.
- Obtaining of some submerged strains of *Claviceps purpurea* with glucansintetic preferential and high capacity and establish of biomedical domains for native glucan preparations. Contract research CEEEX-110 - BIOTECH, 2006-2008.
- Ecological reconstruction by microremediations processes of degraded mining soils CEEEX BIOTECH, 2006-2008.
- Advanced research regarding the use of cereals and cereals waste to obtain bio-ethanol and bio-methanol, used as alternative energy resources in the bio-economy CEEEX-BIOTECH, 2006-2008.
- Complex characterization of some cytostatic active extracts from strains of *Claviceps purpurea* obtained by parasexual hybridization biotechnology, in order to exploit the therapeutic veterinary, Contract no. 62065/2008, PN-II Partnerships in priority areas, 2008-2011.
- Improving the genetic potential and complex characterization of plant biotypes group future impact on ecological and sustainable development in horticulture. Contract no. 52142/2008, PN-II Partnerships in priority areas, 2008-2011.

C. - COLLABORATED IN EUROPEAN RESEARCH LEVEL:

- Putting Halophytes to Work - From Genes to Ecosystems, Action COST FA0901, 2009 - 2014.
- FP7-STAGES ('Structural Transformation to Achieve Gender Equality in Science'), member in UAIC's Network of Academic and Research Women, 2013-2015.

Iași, February 2013

Professor PhD
Maria Magdalena ZAMFIRACHE