Curriculum vitae of Luigi Ruggiero CECI

CURRENT POSITION
Senior scientist at Institute of Biomembranes and Bioenergetics (IBBE) – CNR
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BIRTHDATE
Jan. 02, 1956.

EDUCATION
Degree in Chemistry with honor at the Dpt. of Chemistry of the University of Bari

PROFESSIONAL AWARDS AND POSITIONS

2010 – at present	Member of the Editorial Board of Plant Physiology and Biochemistry (Elsevier Ed.);
2010 – at present	Head of Section (Commessa) "Biogenesi degli Organelli e delle Membrane Cellulari di Trasduzione dell'Energia" at IBBE;
2009 at present	Member of the Management Committee of the COST Action CM0902 "Molecular Machineries for ion Translocation across Biomembranes".
2006 – at present	Senior scientist at IBBE;
2004-2006	Member of the steering committee of Italian Proteomic Society (IPSO).
2000 (June-July)	Visiting scientist at the Plant Research International, Wageningen (NL).
1999 (Jan.-Apr.)	Visiting scientist at the Agricultural Research Department – Centre for Plant Breeding and Reproduction Research (CPRO-DLO), Wageningen (NL).
1998- 2006	Research assistant at "Centro di Studio sui Mitocondri e Metabolismo Energetico (CSMME) - CNR.
1990 – 1998	Contract research assistant at CSMME - CNR.
1989 - 1990	Visiting scientist (European Molecular Biology Laboratory fellowship) at the Institut de Biologie Moleculaire des Plantes of the CNRS (Strasbourg, France).
1985 (Nov.)	Visiting scientist at the Institut de Biologie Moleculaire et Cellulaire (Universités L. Pasteur, Strasburg).
1984 - 1989	Contract research assistant at CSMME - CNR.

RESPONSABILITY OF RESEARCH PROJECTS

2010 at present	Research Unit of the project "Searching of allergens in trace amount, both in plant and animal food, coupled with specific antibody production for their detection" (project PRIN-2008 of the Italian Ministry of Education, Research and University, MIUR).
2007-2008	Research Unit of the Project "Biological Photoremediation" (Regione Puglia, Fondi POR, Progetto Esplorativo n. 57).
2006	"Molecular mechanisms in the environmental stress response in photosynthetic organisms", project RSTL - CNR (cod. 191).

1999-2002	Research Unit of the Project “Lower application of insecticides by the production of insect resistant crops using novel protease inhibitor genes” (European Community , FAIR6-CT98-4239).
1993-2000	"Biogenesis of mitochondrial DNA in higher plants" at CSMME – CNR.

SCIENTIFIC ACTIVITY

2010 at present	Characterization of allergens in maize: expression of recombinant polypeptides for component resolved diagnosis and immunotherapy.
2007 at present	Studies on the adaptation to environmental stress of photosynthetic organisms. Identification of a multigene family coding for the light harvesting protein LHCb1 in spinach. Characterization of the adaptation of the photosynthetic bacterium *Rhodobacter sphaeroides* to heavy metal ions.
1998 – 2010	Identification and characterization of plant protease inhibitors and their genes. Analysis of the MTI-2 family of protease inhibitors in Cruciferae; expression in *Pichia pastoris* of the gene coding for the mustard trypsin inhibitor MTI-2. Expression of the MTI-2 gene in transgenic tobacco and Arabidopsis, and studies on growth and survival of larvae of *Spodottera littoralis* reared on leaves of transformed plants. Identification of MTI-2 variants obtained by site directed mutagenesis and by selection of a phage display library.
1984 – 2003	Characterization of the mitochondrial genomes of higher plants. Structural analysis of the sunflower mitochondrial genome and genes. Organization of tRNA genes. Development of a database for tRNAs and tRNA genes in higher plant mitochondria.

TEACHING ACTIVITY

2010 – at present	Contract Professor at the University of Bari (Faculty of Biotechnology) for the course “Applied Genomics and Bioinformatics”.
2007 – 2010	Tutor at the PhD school of Biochemistry and Molecular Biology of the University of Bari.
2006	Contract professor of “Basic methodologies in Molecular Biology” for the master course in “Diagnostics Phytopathology” of the University of Bari;
2004	Contract professor of “Genetic engineering for environment protection” for the PhD school in Environmental Sciences of the University of Bari.
1999	Contract professor at University of Calabria (Arcavacata di Rende, CS) for the course “Structure and Functions of Proteins”.
1986 – at present	Tutor for experimental thesis in Molecular Biology of students of the Biological Sciences and Biotechnology Courses of the University of Bari.

MEMBERSHIP OF ACADEMIC SOCIETIES

Italian Proteomic Association
Società Italiana di Fotobiologia
Società Italiana di Genetica Agraria

SCIENCE POPULARIZATION

2008 - at present	Responsible of the Section "Proteine, il catalogo è questo" of the magazine Sapere (Dedalo Ed.).

2004-2007 Member of the steering committee of the MIUR project "Sperimentazione di un modello didattico e del prototipo di un sistema misto (e-learning + laboratorio) per la formazione dei docenti e degli studenti sulle Scienze della Vita".

LIST OF PUBLICATIONS ON JCR JOURNALS

1. F. Italiano, G.M. D'Amici, S. Rinalducci, F. De Leo, L. Zolla, R. Gallerani, M. Trotta and **L.R. Ceci.**
   The Photosynthetic Membrane Proteome Of Rhodobacter Sphaeroides R-26.1 Exposed To Cobalt. Research in Microbiology, 2011, In press (DOI:10.1016/j.resmic.2011.04.008).
2. **L.R. Ceci**.
   Plant Protease Inhibitors, a Panoply of Enzymes for Plant Defense, and not Only. Curr Protein Pept Sci. 2011 Mar 22. [Epub ahead of print] No abstract available. PMID: 21418026 [PubMed - as supplied by publisher].
3. M. Volpicella, C. Leoni, A. Costanza, F. De Leo, R. Gallerani and **L.R. Ceci**
   Cystatins, Serpins and Other Families of Protease Inhibitors in Plants. Curr Protein Pept Sci. 2011 Mar 22. [Epub ahead of print]. PMID: 21418017 [PubMed - as supplied by publisher].
4. A. Consiglio, G. Grillo, F. Licciulli, **L.R. Ceci**, S. Liuni, N. Losito, M. Volpicella, R. Gallerani and F. De Leo.
   PlantPIs - An Interactive Web Resource on Plant Protease Inhibitors. Curr Protein Pept Sci. 2011 Mar 22. [Epub ahead of print]. PMID: 21418024 [PubMed - as supplied by publisher]
5. C. Leoni, M. Volpicella, A. Placido, R. Gallerani and **L.R.Ceci**
   Application of a genome walking method for the study of the spinach Lhcb1 multigene family. J. Plant Physiology, 2010, 167:138-143.
6. P. Caccialupi, **LR. Ceci**, R.A. Siciliano, D. Pignone, A. Clemente and G. Sonnante.
   Bowman-Birk inhibitors in lentil: Heterologous expression, functional characterisation and anti-proliferative properties in human colon cancer cells. Food Chemistry, 2010, 120:1058-1066.
7. L. Losurdo, F. Italiano, M. Trotta, R. Gallerani, **L.R. Ceci** and F. De Leo
   Assessment of an internal reference gene in Rhodobacter sphaeroides grown under cobalt exposure. J Basic Microbiol., 2010 , 50:302-305.
8. M. Volpicella, C. Leoni, F. Arnesano, R. Gallerani and **L.R. Ceci**
   Analysis by phage display selection and site-directed retromutagenesis of the Mustard Trypsin Inhibitor 2 reactive site. J Plant Physiol. 2010, 167:1507-1511.
9. F. Pisani, F. Italiano, F. De Leo, R. Gallerani, S. Rinalducci, L. Zolla, A. Agostiano, **L.R. Ceci** and M. Trotta
   Soluble proteome investigation of cobalt effect on the carotenoidless mutant of *Rhodobacter sphaeroides*. J Appl Microbiol. 2009, 106:338-49.
10. M. Volpicella, F. De Leo, M. Sciancalepore, G. Sonnante, D. Pignone, R. Gallerani, **L.R. Ceci**
    Identification and characterization of protease inhibitors in Diplotaxis species. Plant Physiol Biochem. 2009, 47:175-180.
11. A. Placido, TM Regina, C. Quagliariello, M. Volpicella, R. Gallerani, **L.R. Ceci.**
    Mapping of 5' and 3'-ends of sunflower mitochondrial nad6 mRNAs reveals a very complex transcription pattern which includes primary transcripts lacking 5'-UTR. Biochimie, 2009, 91:924-932.
12. F. De Leo, S. Panarese, R. Gallerani and **L.R. Ceci**
    Angiotensin Converting Enzyme (ACE) Inhibitory Peptides: Production and Implementation of Functional Food. Current Pharmaceutical Design, 2009, 15:3622-3643.

13. C. Leoni, R. Gallerani, **L.R. Ceci**
    A genome walking strategy for the identification of eukaryotic nucleotide sequences adjacent to known regions. BioTechniques, 2008, 44: 229-235.
14. G. Rea, M. Volpicella, F. De Leo, L. Zolla, R. Gallerani, **L.R. Ceci**.
    Characterization of three members of the multigene family coding for isoforms of the chlorophyll a/b binding protein Lhcb1 in spinach. Physiologia Plantarum 2007, 130: 167-176.
15. M.Volpicella, J. Cordewener, M.A. Jongsma, R. Gallerani, **L.R. Ceci**, J. Beekwilder
    Identification and characterization of digestive serine proteases from inhibitor-resistant *Helicoverpa zea* larval midgut. J Chromatogr B Analyt Technol Biomed Life Sci. 2006, 833:26-32.
16. F. De Leo, M. Volpicella, M. Sciancalepore, R. Gallerani, **L.R. Ceci**.
    One of the three proteinase inhibitor genes newly identified in the Brassica napus genome codes for an inhibitor of glutamyl endopeptidase. FEBS Lett. 2006, 580:948-54.
17. N. Ferry, L. Jouanin, L.R. Ceci, E.A. Mulligan, K. Emami, J.A. Gatehouse and A.M.R. Gatehouse.
    Impact of oilseed rape expressing the insecticidal serine protease inhibitor Mustard Trypsin Inhibitor-2 on the beneficial predator *Pterostichus madidus*. Mol. Ecol., 2005, 14: 337-349.
18. G. Rainaldi, M. Volpicella, F. Licciulli, S. Liuni, R. Gallerani and L.R. Ceci
    PLMItRNA, a database on the heterogeneous genetic origin of mitochondrial tRNA genes and tRNAs in photosynthetic eukaryotes. Nucl. Acids Res., 2003, 31: 436-438.
19. M. Volpicella, L.R. Ceci, J. Cordewener, T. America, R. Gallerani, W. Bode, M.A. Jongsma and J. Beekwilder.
    Properties of digestive enzymes from Helicoverpa zea adapted to plant defense. Eur. J. Biochem, 2003, 270: 10-19.
20. L.R. Ceci, M. Volpicella, Y. Rahbé, R. Gallerani, J. Beekwilder and M.A. Jongsma
    Selection by phage display of a variant mustard trypsin inhibitor toxic against aphids. The Plant Journal, 2003, 33: 557-566.
21. F. De Leo, M. Volpicella, F. Licciulli, S. Liuni, R. Gallerani and **L.R. Ceci**
    PLANT-PIs: a database for plant protease inhibitors and their genes
    Nucl. Acids Res., 2002, 30: 347-348.
22. F. Damiano, **L.R. Ceci**, L. Siculella and R. Gallerani
    Transcription of two sunflower (Helianthus annuus, L.) mitochondrial tRNA genes having different genetic origins. Gene, 2002, 286: 25-32.
23. M. Volpicella, **L.R. Ceci**, R. Gallerani, M.A. Jongsma and J. Beekwilder.
    Functional expression on bacteriophage of the mustard trypsin inhibitor MTI-2. Biochem. Biophys. Res. Commun., 2001, 280: 813-817.
24. F. Damiano, R. Gallerani, S. Liuni, F. Licciulli and **L.R. Ceci**
    PLMItRNA, a database for mitochondrial tRNA genes and tRNAs in photosynthetic eukaryotes. Nucl. Acids Res., 2001, 29: 167-168.
25. F. De Leo, M. Bonadé-Bottino, **L.R. Ceci**, R. Gallerani and L. Jouanin
    Effects of a mustard trypsin inhibitor expressed in different plants on three Lepidopteran pests. Insect Biochem. Mol. Biol., 2001, 31: 593-602.
26. F. De Leo, **L.R. Ceci**, L. Jouanin and R. Gallerani
    Analysis of mustard trypsin inhibitor-2 gene expression in response to developmental or environmental induction. Planta, 2001, 212: 710-717.
27. V. Volpetti, R. Gallerani, C. De Benedetto, S. Liuni, F. Licciulli and **L.R. Ceci**.
    PLMItRNA, a database for tRNAs and tRNA genes in plant mitochondria: enlargement and updating. Nucl. Acids Res., 2000, 28: 159-162.

28. M. Volpicella, A. Shipper, M.A. Jongsma, N. Spoto, R. Gallerani and **L.R. Ceci**
Characterization of recombinant mustard trypsin inhibitor 2 (MTI-2) expressed in *Pichia pastoris*. FEBS Letters, 2000, 468: 137-141.
29. **L.R. Ceci**, M. Volpicella, S. Liuni, V. Volpetti, F. Licciulli and R. Gallerani.
PLMItRNA, a database for higher plant mitochondrial tRNAs and their genes. Nucl. Acids Res., 1999, 27: 156-157.
30. A. Sagliano, M. Volpicella, R. Gallerani and **L.R. Ceci**.
A FastA based compilation of higher plant mitochondrial tRNA genes. Nucl. Acids Res. 1998, 26:154-155.
31. F. De Leo, M. Bonadé-Bottino, **L.R. Ceci**, R. Gallerani and L. Jouanin
Opposite effects on S. littoralis of low and high expression level of a trypsin proteinase inhibitor in transgenic plants. Plant Physiol. 1998, 118: 997-1004.
32. **L.R. Ceci**, P. Veronico and R. Gallerani.
Identification and mapping of tRNA genes on the Helianthus annuus mitochondrial genome. DNA Sequence 1996, 6: 159-166.
33. P. Veronico, R. Gallerani and **L.R. Ceci**.
Compilation and classification of higher plant mitochondrial tRNA genes. Nucl. Acids Res. 1996, 24: 2199-2203.
34. G. Perrotta, T.M.R. Regina, **L.R. Ceci** and C. Quagliariello.
Conservation of the organization of the mitochondrial nad3 and rps12 genes in evolutionarily distant angiosperms. Mol. Gen. Genet. 1996, 251:326-337.
35. L. Siculella, D. Pacoda, S. Treglia, R. Gallerani and **L.R. Ceci**.
GTG as translation initiation codon in the apocytochrome b gene of sunflower mitochondria. DNA Sequence 1996, 6:365-369.
36. G. Pesole, **L.R. Ceci**, C. Gissi, C. Saccone and C. Quagliariello.
Evolution of the nad3-rps12 gene cluster in angiosperm mitochondria: comparison of edited and unedited sequences. J. of Mol. Evol. 1996, 43:447-452.
37. **L.R. Ceci**, N. Spoto, M. de Virgilio and R. Gallerani.
The gene coding for the Mustard Trypsin Inhibitor 2 is discontinuous and wound inducible. FEBS Letters, 1995, 364: 179-181.
38. **L.R. Ceci**, P. Veronico, L. Siculella and R. Gallerani.
Identification and mapping of trnI, trnE and trnfM genes in the sunflower mitochondrial genome. DNA Sequence, 1995, 5: 315-318.
39. **L.R. Ceci**, M. Ambrosini, S. Fiorella and R. Gallerani.
Detection of a conserved arrangement of three tRNA genes in the sunflower mitochondrial genome. Identification, mapping and expression of trnC-trnN-trnY genes. Biochemistry and Molecular Biology International, 1994, 32: 1161-1172.
40. **L.R. Ceci**, A. Saiardi, L. Siculella and C. Quagliariello.
A tRNA-Val (GAC) gene of chloroplast origin in sunflower mitochondria is not transcribed. Plant Molecular Biology,1993, 23: 727-736.
41. **L.R. Ceci**, M. Dell'Orco and R. Gallerani.
Identification of a nuclear encoded sunflower mitochondrial tRNA-Leu (AAG). Plant Molecular Biology, 1992, 19: 863-866.
42. M. Ambrosini, **L.R. Ceci**, S. Fiorella and R. Gallerani.
Comparison of regions coding for tRNA-His genes of mitochondrial and chloroplast DNA in sunflower: a proposal concerning the classification of "cp-like" tRNA genes. Plant Molecular Biology, 1992, 20: 1-4.
43. **L.R. Ceci**, M. Ambrosini, L. Siculella and R. Gallerani.

Location of a single tRNA-His gene on the master chromosome of sunflower mitochondrial DNA. Plant Science, 1989, 61: 219-225.