

Curriculum vitae DANIELA MARCHINI

PERSONAL

- Name: Daniela
- Surname: Marchini
- Birth: 29/05/1961
- Place of birth: Chiusi (Siena), Italy
- Marital status: married
- Office address: University of Siena, Department of Life Sciences - Via A. Moro, 4 - 53100 Siena - Tel. +39 0577/234406 - E-mail: daniela.marchini@unisi.it

CURRENT POSITION

- PhD in Animal Biology
- Assistant Professor, Department of Life Sciences, University of Siena
- Qualification as Associate Professor in Zoology and Anthropology, 05/B1, 2014-present
- Head of laboratories of Entomology I and II; Liquid chromatography – FPLC
- Delegate of the Life Sciences Department for incoming Orientation, 2014-present
- Referent for Biology, University of Siena, of the National Scientific Degrees Project (PLS) funded by the Italian Ministry of Education University and Research (MIUR), 2014-present

PREVIOUS POSITIONS AND WORKING EXPERIENCES

- PhD student in Animal Biology, University of Siena, 1987-1990
- Post-Doctoral position in Animal Biology, University of Siena, 1991.
- Visiting scientist (for 18 months) at the Department of Human Genetics, Faculty of Medicine, State University of Leiden (NL), laboratory directed by Prof. L.F. Bernini, 1988-1992 (see below)
- Assistant Professor (1991-present) of Comparative Anatomy and Fundamentals of Biology, Didactics of Biology, Reproductive Biology of pest Insects, University of Siena, 1995-present
- Invited speaker at International and Italian Congresses
- Convener and Chair at International Congresses
- Referee of ISI papers
- Referee of International and National Projects
- Referee ANVUR (National Agency to evaluate Research products of Italian University) – VQR 2004-2010
- Faculty member of the PhD program in Evolutionary Biology, University of Siena, 1992-2011
- Faculty member of the PhD program in Life Sciences, 2011-2013
- Member of the International PhD program in Insect Biotechnology, University of Basilicata (Italy), XIX cycle.

FELLOWSHIPS AT UNIVERSITIES AND RESEARCH INSTITUTES, FOREIGN AND INTERNATIONAL, HIGHLY QUALIFIED

- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) - Borsa di Studio Comunità Europea, Progetto Erasmus ICP 88 I 0207 09/1988-12/1988
- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) - Borsa di Studio Comunità Europea, Progetto Erasmus ICP 88 I 0207 01/1989-04/1989
- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) - Borsa di Studio Comunità Europea, Progetto Erasmus ICP 89 I 0051 10/1989-12/1989

- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) - Borsa di Studio Comunità Europea, Progetto Erasmus ICP 89 I 0051 04/1990-06/1990
- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) 02/1991-05/1991
- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) 09/1991-10/1991
- Department of Human Genetics, Leiden University, Faculty of Medicine, Leiden (NL) 06/1992-06/1992

BIBLIOMETRIC PARAMETERS (up to date February, 2020)

- H-index: ISI Web of Science=18; Google Scholar=21;
- Citations: ISI=733; Google Scholar=1161
- 58 publications "*in extenso*" in Journals and Books
- 38 Articles in International Journals (37 ISI; 38 SCOPUS; 51 Google Scholar)
- 1 chapter in International book ISBN
- 2 articles in International books ISBN
- 55 presentations to International and Italian Congresses

TEACHING COURSES AT UNIVERSITY OF SIENA

- Comparative Anatomy of Vertebrates (Degree in Environmental and Natural Sciences), 1995-present
- Fundamentals of Biology (Degree in Environmental and Natural Sciences), 2001-present
- Reproductive Strategies of Vertebrates (Master's Level Degree in Biological Sciences), 2005-2006
- Didactics of Biology (Post-master's level degree: TFA or PF24, Active Formative Training for high school teaching qualification) 2012-13, 2014-15, 2017-18, 2018-19, 2019-20
- Reproductive Biology of pest Insects (Master's Level Degree in Biological Sciences, curriculum Biodiversity and environmental health), 2016-2019

AWARDS FOR SCIENTIFIC ACTIVITY

- Prize for the best poster from young researcher by the Italian Zoological Union at the 52° UZI Congress, Camerino (Italia), 12-16/09/1988
- Invited person, by the Nobel prize in Physiology or Medicine 2011 Jules A. Hoffmann, to chair the session "Antimicrobial peptides in innate immunity, b)" at the 2nd Gordon Research Conference, il Ciocco, Barga, Italy, 1999
- Chairperson of the session "Insect Immunity" al XX International Congress of Entomology, Firenze 1996

MAIN RESEARCH TOPICS

- Reproductive biology of Insects:
 - Functional morphology, ultrastructure and biochemistry);
 - Polyandrous behavior and sperm use in *Ceratitis capitata*
 - Sperm transfer and storage in Insects
- Antimicrobial peptides related to animal reproduction
- Extracellular bacteria associated to insects

METHODS UTILIZED

- Microscopy (LM , FM, TEM, SEM)

- Biochemistry (denaturing and native electrophoresis, protein purification by liquid chromatography, FPLC)
- Monitoring of bioactive peptides by antimicrobial, haemolytic and enzymatic assays

EDUCATION

- 1980: Diploma of Humanities High School
- 1986: Doctorate cum laude in Biological Sciences (University of Siena, Italy). Title of the thesis: "Ultrastructure of the female reproductive accessory glands of *Ceratitis capitata* (Diptera: Tephritidae)"
- March 1986-March 1987: Research activity on biochemical characterization of the secretion from female reproductive accessory glands of *Ceratitis capitata* under the supervision of Prof. J. Nordin (University of Amherst, Massachusetts, USA, visiting professor at University of Siena)
- March 1986-March 1987: Practical stage at the Department of Evolutionary Biology, University of Siena (Sections: Zoology and Biochemistry) for final examination to the Italian professional affiliation to Ordine Nazionale dei Biologi
- 1990: PhD in Animal Biology, University of Siena. Title of PhD thesis: The female reproductive apparatus of *Ceratitis capitata* (Insecta, Diptera): ultrastructural and biochemical aspects

INTERNATIONAL SCIENTIFIC ACTIVITY

- Convenor and Chair-person of the Section no. 7 "INSECT IMMUNITY" at the XX International Congress of Entomology (Firenze 25 - 31 Agosto 1996)
- Selected participation and Lecture at the EMBO WORKSHOP ON INSECT IMMUNITY at Strasbourg (France) from 6 to 13 September 1992. Workshop organized by Dan Hultmark and Jules A. Hoffmann, 2011 Nobel Prize in Physiology or Medicine
- Lecture at the Symposium "IMMUNE REACTION IN INSECTS" of the VIth International Colloquium on Invertebrate Pathology and Microbial Control. Montpellier (F) from 26/8 to 2/9/94, invited speaker by Philippe Bulet from Research Group "Réponse Immunitaire et Développement chez les insectes" of the institute of Molecular and cell biology of Strasbourg (F);
- Lecture: "Ceratotoxin: an antibacterial, sex-specific peptide related to the reproduction of the medfly *Ceratitis capitata*" at the European Meeting "PROSPECTS ON INSECT TRANSGENESIS" Lion (F) 27/5/94, invited speaker by del Dr. Pierre Couble from "Centre de genetique moleculaire et cellulaire du C.N.R.S." Université Claude Bernard, Lion;
- lecture at "FIRST INTERNATIONAL WORKSHOP ON TRANSGENESIS OF INVERTEBRATES OF MEDICAL, AGRICULTURAL, AND AQUACULTURAL IMPORTANCE", Montpellier (F) from 21 to 26 Aprile 1995, invited speaker by prof. Max Bergoigne, Université of Montpellier;
- attending at the Meeting "ANTIBACTERIAL PEPTIDES", London, January 1994, organized by Wellcome Trust;
- In 1994, she has been invited by Prof. Peter Ham, Department of Biological Sciences, Keele University (Staffordshire, UK) to research activity in his laboratory on the purification of antimicrobial peptides;
- Lecture at Workshop "ANTIMICROBIAL PEPTIDES AND THEIR INTERACTION WITH MEMBRANES: TOWARD A STRUCTURE-BASED DESIGN STRATEGY" (Trieste 5-6 Dicembre 1997), invited by Prof. P. Fasella
- Invited as chair-person of the section "Antimicrobial peptides in innate immunity" at the 2ND GORDON RESEARCH CONFERENCE ON ANTIMICROBIAL PEPTIDES (Il Ciocco, Barga, Italy, April, 25-30, 1999) by Prof. J.A. Hoffmann (Strasbourg, France, 2011 Nobel Prize in Physiology or Medicine)
- Lecture at the European PhD student Course on Insect functional morphology (Siena, 20/11-

4/12/ 2003) organized by International PhD school on "Insect Biotechnology", University of Basilicata (XIX ciclo)

- Reviewer for papers from European Journal Biochemistry, Royal Society of London, Proceedings B, Journal of Molecular Evolution, Journal of Applied Entomology, Neotropical Entomology, European Journal of Entomology, Acta Zoologica, Invertebrate Reproduction and Development, Zoomorphology, Tissue & Cells, Insects, Journal of Insect Physiology.
- Reviewer for two Project USA 2006-2009 and 2013-2016
- Reviewer for a Project from an European Country, 2016

INTERNATIONAL SCIENTIFIC COLLABORATIONS

- Prof. Luigi F. Bernini and Prof. P.C. Giordano, 'Instituut voor Anthropogenetica der Rijksuniversiteit, Leiden (NL)
- Prof. Gerard Molle, Centre de Biochimie Structural, University of Montpellier (F);
- Prof. Phillip W. Taylor, Department of Biological Sciences, Macquarie University, Sydney, Australia

ITALIAN SCIENTIFIC ACTIVITY

- Member of the organizing committee of the 55th Congress of the Italian Embryological Group, Siena, 28-30 / 09/2009
- Many lectures at Congresses, Workshops, Symposia and Meetings, also as invited speaker MIUR - PRIN 2007
- REFEREE MIUR - PRIN 2009
- REFEREE MIUR - Futuro in Ricerca 2013
- REFEREE ANVUR VQR 2004-2010, GEV-05, 2012.

PROFESSIONAL AFFILIATIONS

- Unione Zoologica Italiana (Italy)
- Ordine Nazionale Biologi (Italy)

GRANTS AWARDED

- 1988/89 and 1989/90: fellowship for Erasmus Projects by European Community
- 1987-89: PhD fellowship from University of Siena
- 1991: Post Doctoral fellowship from University of Siena

GRANTS AWARDED FOR PROJECTS (SUPERVISOR and PRINCIPAL INVESTIGATOR: DANIELA MARCHINI)

- 2015-2018 National Scientific Degrees Project (PLS) Biology, funded by the Italian Ministry of Education University and Research (MIUR)
- 1994-96: Research Project "Utilizzazione farmacologica di secrezioni prodotte naturalmente da insetti quali sostanze antibatteriche", 3° program of targeted health research from Regione Toscana (Italy)
- 1995-97 MURST 60% "Biologia della Riproduzione dei Ditteri Tefritidi"
- 1998-00 MURST 60%: "Caratterizzazione biochimica e molecolare di proteine correlate alla riproduzione nei ditteri Tefritidi"
- 1998: "La riproduzione di *Ceratitis capitata* (Insecta, Diptera): studio molecolare e controllo ormonale"
- 2001: PAR project from University of Siena "La riproduzione di *Ceratitis capitata* (Diptera: Tephritidae): ricerche ultrastrutturali e biochimiche".

- 2002: PAR project from University of Siena “La riproduzione di *Ceratitis capitata* (Diptera, Tephritidae): caratterizzazione biochimica del secreto delle ghiandole riproduttive accessorie maschili”
- 2003-2004 PAR project from University of Siena “L'apparato riproduttore della mosca delle olive *Bactrocera oleae* (Diptera, Tephritidae): ricerche ultrastrutturali e biochimiche”.

GRANTS AWARDED FOR OTHER RESEARCH PROJECTS (P.I. and Co-P.I.: Daniela Marchini)

- 1991-95: National Research Council of Italy. Special Project RAISA, Subproject no. 2: Molecules for the fertilization control in *Ceratitis capitata*
- 1990-1994: Ministero Agricoltura e Foreste "LOTTA BIOLOGICA E INTEGRATA PER LA DIFESA DELLE COLTURE AGRARIE E FORESTALI"
- 1995: Project Galileo Italy-France (Dr. Paul T. Brey, Pasteur Institute of Paris, France).
- 1997-2000 Ministero per le Politiche Agricole “CONTROLLO BIOLOGICO DI CERATITIS CAPITATA (DIPTERA, TEPHRITIDAE) ATTRAVERSO TECNICHE GENETICHE E BIOMOLECOLARI
- 1988-1994: MURST 40% "INTERAZIONI CELLULARI"
- 1993, 1994: MURST 60%
- 1997-2002: Regione Toscana (OTA-ARSIA) “CONTROLLO BIOLOGICO DI BACTROCERA OLEAE MEDIANTE L'USO DI FORMULATI A BASE DI ESTRATTI DI NEEM”
- 2000/2002 PRIN-MIUR
- 2002/2004 PRIN-MIUR
- 2004/2006 PRIN-MIUR
- 2006/2008 PRIN-MIUR
- 2008/2010 PRIN-MIUR