

CURRICULUM VITAE (2019)

Dr. Maria Luisa Chiusano

Nationality: Italian

Place of birth: Pescara, Italy

Date of birth: 07/10/1968

URL googlescholar:

https://scholar.google.it/citations?hl=en&user=3Yf0OP4AAAAJ&view_op=list_works&sortby=pubdate

POSITION

Associated Professor of Molecular Biology (05/E2), University of Napoli Federico II, Dept. of Agraria, Italy
Ability as Full Professor since Dec 2017 (05/E2)

RESEARCH INTERESTS

Molecular Biology, Genomics, Environmental Metagenomics and Bioinformatics.

SCIENTIFIC RESPONSIBILITIES (Selective)

- From 2005 to 2012: Italian member of the Bioinformatics Steering Committee of the international Solanaceae Genomics network (<http://sgn.cornell.edu/solanaceae-project/sol-bioinformatics/>), and organizer of the Italian Bioinformatics service for the Tomato Genome Project.
- From 2005 to 2012: Italian member of iTAG, the international Tomato Annotation Group.
- Since 2005-2012: member of the EU-SOL, a network of plant scientists for Solanaceae genomics. Participated as responsible of operative unit in the Module of Bioinformatics in the associated integrated project (VI frame programme, EU).
- From 2006 to 2011: responsible for Bioinformatics in the Italian project "Genopom: laboratorio Pubblico Privato" (FAR, MIUR).
- Since 2012: responsible for bioinformatics in the Marie Curie Actions ITN Project 289220: "SPOT-ITN—Pollen thermotolerance and crop fertility", VII Frame Programme EU.
- Since 2012: coordinator of the workgroup for bioinformatics in the COST action FA1106 "An integrated systems approach to determine the developmental mechanisms controlling fleshy fruit quality in tomato and grapevine", VII Frame Programme EU.
- She designed and implemented ISOL@ (Chiusano et al. 2008), the Italian SOLAnaceae bioinformatics web based platform, to organize "omics" data from Solanaceae.
- In 2009, consultant for Biosistema, for "Formazione di alte professionalità per lo sviluppo e la competitività delle imprese con priorità alle PMI" and organizer of the experimental pipeline and the bioinformatics for a 454 technology service at ENEA (Trisaia).
- Since January 2016: associated scientist of the Stazione Zoologica Anton Dohrn, Naples.
- Since July 2016: responsible for the implementation of the Bioinformatics service in the Stazione Zoologica Anton Dohrn, Naples.
- Since 2019, responsible of the joint effort of the Department of Agraria and the Stazione Zoologica Anton Dohrn for Bioinformatics services.
- Dr. Chiusano has been invited speaker, organized and is part of the scientific committee in several national and international meetings
- She is reviewer for several international scientific journals
- She is member of the editorial board of The Scientific World Journal (<http://www.tswj.com/workflow/>);
- Since 2018: Review Editor of Frontiers in Bioengineering and Biotechnology, Genetics and Plant Science.
- Since 2018 She is representative of the Dept. of Agraria in the TASK Force Blue Italian Growth of the University Federico II

MEMBERSHIP IN SCIENTIFIC ACADEMIES:

- Member and co-founder of the "Società Italiana di Bioinformatica" since 2003
- Member of the "Società Italiana di Genetica Agraria" since 2006
- March 2006-2008, she has been councilor of the Scientific Committee of the "Società Italiana di Bioinformatica". July 2008-2010 role renewed.
- Collaborates with BIG DATA IN HEALTH SOCIETY since 2020

MEMBERSHIP IN NATIONAL AND INTERNATIONAL COMMITTEES FOR FAIR DATA MANAGEMENT

- Since January 2019: she is LTECH member in the Italian node of the European infrastructure Elixir.
- Since 2019: she is the Italian member of the Working Group E-infrastructure in the European infrastructure EMBRC.
- Since 2019: she is member of the data management network in the Italian node of the European infrastructure EMSO.
- Since 2020: She is member of the EOSC-LIFE WP4 for sensitive data organization

FUNDS and PARTICIPATION IN NATIONAL PROGRAMMES:

- PRIN 2006: Biomarker delle modifiche Post trasduzionali delle proteine del latte in relazione allo stato di salute della bovina (coordinatore Prof. Gianfranco Greppi)
- 2004-2006 (elongated 1 year): Italian Ministry of Agriculture (MIPAF): Agronotech, Responsible of Scientific Unit
- 2008-2011 (elongated 1 year): Italian Ministry of Agriculture (MIPAF): Agronotech2, Responsible of Scientific Unit
- 2008-2011: Italian Ministry of Research (MiUR) Laboratorio di Genomica per l'innovazione e la valorizzazione della filiera pomodoro (Genopom), Consultant for bioinformatics.
- 2012-2015: MiUR PON "Ricerca e Competitività" 2007-2013. Potenziamento della filiera pomodoro attraverso applicazioni integrate di post-genomica (GenoPOM-pro) (3 years). Responsible of Scientific Activities.
- 2012-2015: MiUR PON "Ricerca e Competitività" 2007-2013 Valorizzazione di produzioni ortive campane di eccellenza con strumenti di genomica avanzata (GenHORT) (3 years). Responsible of Scientific Activities.
- 2014-2016: IZS ME 06/13 RC in collaborazione con Istituto Zooprofilattico sperimentale del Mezzogiorno. "Studio pilota su *Bubalus bubalis* per l' identificazione di patogeni abortigeni e non , mediante implementazione di strategie di Deep Sequencing".
- 2016-2017: Responsible of the Flagship Project "Bioinforma: Bioinformatics for Marine Biology". Stazione zoologica A. Dohrn, Naples.
- 2019: participates in the FEAMP project for innovation, development and quality of Fishery in Campania. She is responsible of the organization of the bioinformatics portal of the project.

FUNDS and PARTICIPATION IN INTERNATIONAL PROGRAMMES:

- Aprile 2006 al 2011: FP6-2004-FOOD-3-A: High Quality Solanaceous Crops for Consumers, Processors and Producers by Exploration of Natural Biodiversity (60 months) (EU-SOL, integrated project FP6, EU). Workpackage Bioinformatics as Italian representative.
- 01/01/2012-31/12/2015: FP7-People-2011-ITN: Pollen thermotolerance and Crop Fertility (SPOT-ITN Marie Curie Actions, EU). Responsible of Scientific Unit (4 years)
- 26/04/2012-25/04/2016: COST Action FA1106 : An integrated systems approach to determine the developmental mechanisms controlling fleshy fruit quality in tomato and grapevine (60 months). Coordinator of Workgroup 2: «Bioinformatics tools for data analysis »

TECHNOLOGY TRANSFER

- In 2009, she was consultant for Biosistema, for "Formazione di alte professionalità per lo sviluppo e la competitività delle imprese con priorità alle PMI" and she supported the implementation of the experimental pipeline and the bioinformatics for a 454 technology service at ENEA (Trisaia)
- She is member of the start up NO-SELF, owner of a Patenting in which she contributed for her expertise in Molecular Biology and Bioinformatics.
- She is coinventor of the patent n. PCT/EP2020/071981

OUTREACH ACTIVITY

Invited lecturer

- "Festival della Scienza 2013" 23 Ottobre-3 Novembre, Genova. Conferenza "La sfida del XXI secolo: nutrire il pianeta senza danneggiarlo: riconciliare la conservazione della biodiversità e la sicurezza alimentare"
- "Darwin Day" 12 Febbraio 2014, Department of Agraria, Università degli Studi di Napoli, titolo della relazione: "Il programma biologico: la perfezione dell'imperfezione in un disegno perfetto" dal 12-02-2014 al 12-02-2014
- "Bergamo Scienza" 12 Ottobre 2014, Bergamo.

Conferenza “La bellezza salverà il mondo?” titolo della relazione: “Selezione naturale e selezione artificiale: una questione di punti di vista!” dal 12-10-2014 al 12-10-2014

-Forum PA 2018: presents “scientific data digitalization” <https://forumpa2018.eventifpa.it/it/event-details/?id=8302>

-Forum PA 2019: participates in MIUR round table as representative of the Department of the University Federico II and the Stazione Zoologica Anton Dohrn <https://forumpa2019.eventifpa.it/it/event-details/?id=8574/?cache=force>

Press articles

- 1) “Anche l’informatica diventa BIO e innova i metodi”, di *Maria Luisa Chiusano* (2005). In “Come alla Corte di Federico II” (Contribution in the special issue *Geni, Genomi e Malattie* from *Corriere del Mezzogiorno*);
- 2) “I BioBricks: costruire la vita *on demand*” di *Maria Luisa Chiusano e Luigi Lania*, on UNINA website (2005);
- 3) Tutti i segreti del pomodoro – press review in *Napoli più*, 1 aprile 2008;
- 4) Genoma del pomodoro, studio napoletano – press review in quotidiano *Roma*, 31 marzo 2008;
- 5) Zafferano: svelati I segreti genetici da un consorzio italiano – *Mondo agricolo* 20/2007;
- 6) https://www.ilmessaggero.it/social/covid_19_ricerca_molecolare-5202200.html

REPRESENTATIVE SHORTLIST OF PUBLICATIONS WITH MAJOR RESPONSIBILITIES SINCE 2015 AMONG MORE THAN 80 PEER REVIEWED ARTICLES (please consult google scholar for further details and updates)

As corresponding author or senior scientist:

1. Bostan H, Chiusano ML (2015) NexGenEx-Tom: a gene expression platform to investigate the functionalities of the tomato genome. *BMC Plant Biol*, 15:48. DOI 10.1186/s12870-014-0412.
2. Mazzoleni S, Carteni F, Bonanomi G, Senatore M, Termolino P, Giannino F, Incerti G, Rietkerk M, Lanzotti V, Chiusano ML. (2015) Inhibitory effects of extracellular self-DNA: a general biological process? *New Phytol*, 206(1):127-32. DOI: 10.1111/nph.13306.
3. Ambrosino L., Bostan H.*, Di Salle P., Chiusano ML. (2016) pATsi: paralogs and singleton genes from *Arabidopsis thaliana*. *Evolutionary Bioinformatics Online* 12, 1
4. Ruggieri V, Bostan H, Barone A, Frusciante L, Chiusano ML. (2016) "Integrated Bioinformatics to decipher the Ascorbic Acid Metabolic Network in Tomato" *Plant Mol Biol*, 91(4-5):397-412. DOI 10.1007/s11103-016-0469-4.
5. Di Salle P.*, Incerti G.*, Colantuono C., Chiusano ML. (2016) Gene co-expression analyses: an overview from microarray collections in *A. thaliana*". *Briefings in Bioinformatics* Briefings in bioinformatics, bbw002
6. Ambrosino L., Chiusano ML. (2017) Transcriptologs: A Transcriptome-Based Approach to Predict Orthology Relationships. *Bioinformatics and Biology Insights* 2017 (11), 0-0
7. Monticolo, F., Colantuono, C., Chiusano, M.L. (2017) "Shaping the evolutionary tree of green plants: Evidence from the GST family" *Scientific Reports*, 7,1.
8. Ambrosino L, Ruggieri V, Bostan H, Miralto M, Vitulo N, Zouine M, Barone A, Bouzayen M, Frusciante L, Pezzotti M, Valle G, Chiusano ML. Multilevel comparative bioinformatics to investigate evolutionary relationships and specificities in gene annotations: an example for tomato and grapevine. *BMC Bioinformatics*. 2018 Nov 30;19(Suppl 15):435.
9. Tangherlini M, Miralto M, Colantuono C, Sangiovanni M, Dell' Anno A, Corinaldesi C, Danovaro R, Chiusano ML. GLOSSary: the GLObal Ocean 16S subunit web accessible resource. *BMC Bioinformatics*. 2018 Nov 30;19(Suppl 15):443.
10. Ambrosino L, Colantuono C, Diretto G, Fiore A, Chiusano ML. Bioinformatics Resources for Plant Abiotic Stress Responses: State of the Art and Opportunities in the Fast Evolving -Omics Era. *Plants (Basel)*. 2020 May 6;9(5):E591. doi: 10.3390/plants9050591.PMID: 32384671 Review.
11. Ambrosino L, Tangherlini M, Colantuono C, Esposito A, Sangiovanni M, Miralto M, Sansone C, Chiusano ML. Bioinformatics for Marine Products: An Overview of Resources, Bottlenecks, and Perspectives. *Mar Drugs*. 2019 Oct 11;17(10):576. doi: 10.3390/md17100576.PMID: 31614509 Free PMC article. Review.
12. Monticolo F, Palomba E, Termolino P, Chiaiese P, de Alteriis E, Mazzoleni S, Chiusano ML The Role of DNA in the Extracellular Environment: A Focus on NETs, RETs and Biofilms *Front Plant Sci*. 2020; 11: 589837. Published online 2020 Dec 17. doi: 10.3389/fpls.2020.589837 PMCID: PMC7793654
13. Monticolo F, Palomba E, Chiusano ML Identification of Novel Potential Genes Involved in Cancer by Integrated Comparative Analyses *Int J Mol Sci*. 2020 Dec; 21(24): 9560. Published online 2020 Dec 15. doi: 10.3390/ijms21249560 PMCID: PMC7765469
14. Monticolo F, Palomba E, De Santis R, Assentato L, Triscino V, Langella MC, Lanzotti V, Chiusano ML Anti-HCoV: A web resource to collect natural compounds against human coronaviruses *Trends Food Sci Technol*. 2020 Dec; 106: 1–11. Published online 2020 Sep 22. doi: 10.1016/j.tifs.2020.09.007 PMCID: PMC7505852

15. Becchimanzi A, Avolio M, Bostan H, Colantuono C, Cozzolino F, Mancini D, Chiusano ML, Pucci P, Caccia S, Pennacchio F
Venomics of the ectoparasitoid wasp *Bracon nigricans* BMC Genomics. 2020; 21: 34. Published online 2020 Jan 10. doi: 10.1186/s12864-019-6396-4 PMID: PMC6954513
16. Monticolo F, Palomba E, Chiusano ML Translation machinery reprogramming in programmed cell death in *Saccharomyces cerevisiae*. Cell Death Discov. 2021; 7: 17. Published online 2021 Jan 18. doi: 10.1038/s41420-020-00392-x PMID: PMC7814045

Invited Review articles as corresponding author

17. Esposito A., Colantuono C., Ruggieri V., Chiusano ML. (2016) Bioinformatics for Agriculture in the Next Generation Sequencing era". Chemical and Biological Technologies in Agriculture (Invited review) Chem Biol Technol Agric, 3:9. DOI 10.1186/s40538-016-0054-8 **Review article**
18. Ambrosino L., Bostan H., Ruggieri V., Chiusano ML. (2016) [Bioinformatics resources for pollen](#). Plant Reprod, 29(1-2):133-47. doi: 10.1007/s00497-016-0284-8. **Review article**

As Invited Editorial :

19. ML Chiusano (2015) On the Multifaceted Aspects of Bioinformatics in the Next Generation Era: The Run that must keep the Quality. Journal of Next Generation Sequencing & Applications 2015

All the things that are declared in this document are true and can be documented upon requests, according to artt. 46 e

47, D. P. R. n. 445/ 2000.

Maria Luisa Chiusano 