



## Paola Vittorioso

**Nationality:** Italian **Date of birth:** 30/10/1963 **Gender:** Female

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**Home:** Via Lorenzo Perosi 14, 00013 Mentana (RM) (Italy)

**Work:** P.le Aldo Moro 5, 00185 Rome (Italy)

### WORK EXPERIENCE

#### Assistant Professor (RTI)

**Sapienza University of Rome, Dept. Biology and Biotechnology C. Darwin "C. Darwin"** [ 01/04/1999 – Current ]

City: Rome

Country: Italy

■ Principal Investigator.

Research projects "Hormonal control of the seed-to-seedling transition phase in *Arabidopsis thaliana*: role of the DOF AFFECTING GERMINATION1 transcription factor";

"Molecular and physiological analysis of ABA-mediated abiotic stress response in *Arabidopsis thaliana*: the molecular pathway of Cold Acclimation response";

"Development of pharmacological approaches to study epigenetic control (PRC2, HAT/HDAC) in seeds and seedlings of *Arabidopsis thaliana*"

"Seed germination process in the model plant *Cardamine hirsuta*: a physiological, genetic and molecular study"

#### Post-doctoral fellowship

**Sapienza University of Rome, Dept. Biology and Biotechnology Charles Darwin** [ 01/01/1997 – 31/03/1999 ]

City: Rome

Country: Italy

• Post-doctoral EU fellowship

Post-doctoral project "Molecular and functional characterization of *Dof* genes of *Arabidopsis thaliana* in light-mediated processes"

#### Post-doctoral fellowship

**Institut National Recherche Agronomique (INRA) Ist. J.P. Bourgin** [ 01/11/1994 – 31/12/1996 ]

City: Versailles

Country: France

• Post-doctoral INRA fellowship

Post-doctoral research project "Molecular and functional characterization of *pasticcino* mutants of *Arabidopsis thaliana*".

#### PhD student

**Sapienza University of Rome Dept. Cellular Biology and hematology** [ 01/11/1990 – 31/10/1994 ]

City: Roma

Country: Italy

PhD Research Project: "Identification and characterization of *WHITE COLLAR I*, a new element of the blue light transduction pathway in *Neurospora crassa*"; "Study of the internal translation start site in the *albino-3* mRNA in *Neurospora crassa*". Supervisor Prof. Giuseppe Macino

### **Fellowship**

**Sapienza University of Rome Dept. Cellular Biology and haematology** [ 01/03/1990 – 31/10/1990 ]

City: Roma

Country: Italy

Research project "Functional characterization of *albino* mutants of *Neurospora crassa*"

### **Researcher**

**Enichem Agricoltura SpA** [ 01/01/1989 – 31/01/1990 ]

City: Monterotondo

Country: Italy

Researcher. Research Project "Study on *Azospirillum* activity on maize cultivars: effects on root colonization and on early development". She resigned in January 1990.

### **Junior Researcher (Fellowship Institut Pasteur-Fondazione Cenci Bolognetti)**

**Institut Louis Pasteur "Unité de Biochimie Microbienne"** [ 01/01/1988 – 31/12/1988 ]

City: Parigi

Country: France

Research project "Production of gas vesicles in *Bacillus thuringiensis israelensis*". Supervisor dr. Catherine Bourgouin.

### **Junior researcher**

**Sapienza Università di Roma. Dept. Microbiology** [ 01/01/1987 – 31/12/1987 ]

City: Roma

Country: Italy

Research Project "Identification of bacterial species from Sulcis coal". Supervisor Prof. Piera Valenti

## **EDUCATION AND TRAINING**

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### **PhD "Human Biology: molecular and cellular bases"**

**Sapienza University of Rome Dept. Cellular Biology and haematology** [ 01/11/1990 – 31/10/1994 ]

City: Roma

Country: Italy

PhD Thesis " "Identification and characterization of *WHITE COLLAR I*, a new element of the blue light transduction pathway in *Neurospora crassa*" Tutor Prof. Giuseppe Macino

### **Degree in Biology 110/110 cum laude**

**Sapienza University of Rome Dept. Cellular and Developmental Biology** [ 01/10/1982 – 31/10/1986 ]

City: Roma

Country: Italy

Master Thesis "Genetic and functional analysis of a *Pseudomonas* endogenous plasmid which confers the ability to grow on styrene" Tutor Prof.ssa Laura Frontali

## High School-Maturità scientifica

*Liceo Scientifico Augusto Righi* [ 01/10/1977 – 15/07/1982 ]

City: Roma

Country: Italy

grade mark 52/60

## ORGANIZATION, MANAGEMENT

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### Coordination of research groups

[ Current ]

The Vittorioso laboratory works mainly on light-mediated developmental processes, on the model system *Arabidopsis thaliana*.

The laboratory has been active at Sapienza University of Rome since 1998 and began by studying the light-mediated seed germination process in *Arabidopsis thaliana*, and the role of the Dof transcription factors DAG1 and DAG2 in this process. This study has widened to the analysis of ABA response during post-germination seedling development, under normal and adverse conditions (cold and light stress).

Recently the Vittorioso group has focused its interest in the process of seed germination in the model system *Cardamine hirsuta*; we are currently isolating Crispr KO mutants of the main factors involved in this process in *Arabidopsis*.

Another important research topic of the group is the development of pharmacological approaches to study epigenetic control (PRC2, HAT/HDAC) in seeds and seedlings of *Arabidopsis thaliana*.

The Vittorioso laboratory currently hosts 3 PhD students, a young researcher, 4 graduate students (Master level) and one Bachelor student.

### Teaching and tutoring activities

[ 01/01/2000 – Current ]

#### Tutoring

- Tutor of 54 Bachelor thesis (Biology, Biotechnology), 21 Master thesis (Genetics and Molecular Biology, Genomic Biotechnology)
- Tutor of 10 PhD students (PhD Courses: LifeSciences, Genetics and Molecular Biology)

#### Teaching

2010- Present:

- Lecturer of Metodologie del DNA ricombinante. L3-30043. 6 CFU
- 2001 - 2007: Lecturer of Biologia Molecolare Vegetale, Corso di studi Biotecnologie L3-29887. 3CFU
- 2004-2007: Lecturer of Analisi strutturale e funzionale dei Genomi. Corso di studi Scienze Biologiche L3-30043. 3 CFU
- 2005-2007: Lecturer of Metodi e sistemi in Biologia Molecolare, Corso di studi Genetica e Biologia Molecolare LM-29887. 3CFU
- 2008-2010: Lecturer of Ingegneria Genetica. Corso di studi Scienze Biologiche L3-30043. 4 CFU
- 2010-Present: Lecturer of Metodologie del DNA ricombinante. Corso di studi Scienze Biologiche L3-30043. 6 CFU
- 2017-2018: Lecturer of "Elementi di Ingegneria Genetica e OGM", Corso di studi Biotecnologie Genomiche, Industriali ed Ambientali LM-30054. 6 CFU

## Services

[ Current ]

- Reviewer of the following international journals: BMC Plant Biology, Frontiers in Plant Science, International Journal of Molecular Sciences, Journal of Integrative Plant Biology, Molecular Plant, Planta, Plant Physiology, Plant Cell.
- Reviewer for the following Research Programs: European Community programs; The Israel Science Foundation; Agence Nationale de la Recherche-Francia; Programma per Giovani Ricercatori "Rita Levi Montalcini"
- Member of the editorial board of the following peer-review scientific journals: Frontiers in Plant Science (Frontiers Ed.), Scientific Reports (Springer Nature Ed.), Genes (MDPI)

## Institutional activities

- Member of the Departmental Board, Department of Biology and Biotechnology Charles Darwin (Giunta) (2018/2021, 2021/2024)
- Member of the Faculty Board, Faculty SMFN (2018/2021, 2023/2024)
- Member of Consiglio di Amministrazione di Sapienza, University of Rome (03-2023/2026)
- Member of the Scientific Board of the Life Sciences PhD - Sapienza, University of Rome (2007-2017)

## ORGANISATIONAL SKILLS

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### Fundings

- PRIN 2022 "Improving plant resilience to adverse environments: identification of novel potential epigenetic drugs using an abiotic-stress-based screening in plants" (20228Z8TXN, 24 months) (PI, Scientific Coordinator)
- Tutor of the following fundings Sapienza\_Avvio alla ricerca Longo (2021), Lepri (2022), Kazmi (2023), Longo (2023)
- Sapienza Ricerche Universitarie 2022 "Exploiting properties of microRNAs in animals and plants to improve human health" (RG12218166E3EE68, 24 months) (Partner)
- POR-FESR-Lazio 2021/2023 "SEMINE: semi di microverdure per nuovi orizzonti di esplorazione spaziale (A0375-2020-36640 24 months, 150000€)
- Sapienza Ricerche Universitarie 2021 "Molecular mechanisms involved in root developmental plasticity in response to a changing environment" (RG12117A85ECBF84, 24 months) (Partner)
- Sapienza Ricerche Universitarie 2020 "Molecular mechanisms in balancing cell division with cell differentiation during *Arabidopsis thaliana* root development" (RM120172ACE1A76C, 24months) (Partner)
- Sapienza Ricerche Universitarie 2019 "The role of the root cortex in plant adaptation" (RM11916B7AB04C71, 12 months) (Partner)
- Sapienza Ricerche Univesitarie 2018 "Molecular mechanisms in developmental boundary formation". (RG11816422810FC1 12 months; 28000€) (Partner)
- Sapienza Ricerche Universitarie 2016 "Unraveling the molecular mechanisms through which germinating seeds sense, respond and adapt to environmental stress" (12 months; 4000€) (PI)
- Sapienza Ricerche Universitarie 2015 "Uncovering the molecular mechanisms underlying seed maturation, dormancy and germination in *Arabidopsis thaliana*: the role of the Dof Affecting Germination1 protein, a central player in the control of these processes". (C26A15PMPA 12 months; 4000€) (PI)
- Istituto Pasteur-Fondazione Cenci-Bolognetti "Study of the role of DAG1 and GAI in embryogenesis and seed germination in *Arabidopsis thaliana*" (2012-2015; 2000€/year) (PI)
- Sapienza Ricerche Universitarie 2011 "Study of the role of post-translational regulation in light-mediated early developmental stages in plants: seed germination and hypocotyl elongation" (C26A113HCM 12 months; 8000€) (PI)
- PRIN 2005: "Approccio multidisciplinare allo studio di fattori trascrizionali in *Arabidopsis thaliana*" (200505422 3\_003 24 months; 57000€) (PI of a RU)
- European Project REGIA (REgulatory Gene Initiative in Arabidopsis) (#QLRT-1999-00876; '99-'02, V; 3years, 200000€/year) Co-Coordinator)

## COMMUNICATION AND INTERPERSONAL SKILLS

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### Communication and interpersonal skills

Excellent communication skills, at scientific, educational and informative level.

- Member of the Scientific Board of the Master "Le scienze della vita nel giornalismo e nei rapporti politico-istituzionali" (SGP) (2010-ongoing).
- Member of the Organizing Committee for the exhibition "La scienza illumina", promoted by Sapienza University of Rome (Facoltà di Scienze Matematiche, Fisiche e Naturali) and Fondazione Mondo Digitale, for the International Year of Light (2015).
- Italian Representative of the MASC (Multinational Arabidopsis Steering Committee) (2002-2008).
- Member of the Scientific Board of the Federazione Italiana Scienze della Vita (FISV) (2002-2007).

### Outreaching activities

- Invited speaker to the event in memory of Pietro Greco "Sullo spazio: Scienza e bellezza" Aula Magna Università di Roma Tre, 12/5/2023
- Invited speaker to the event in memory of Pietro Greco "Sul tempo: Scienza e bellezza", Aula Magna Università di Roma Tre, 29/4/2022
- Invited speaker in the Webinar in memory of Pietro Greco "Sulla luce: Scienza e bellezza", Aprile 2021.
- Participant to the following communication activities: Geo & Geo (RAI3) ("Che cos'è il DNA" 2010), (2008/2010), Meeting Scienza in Abbazia: OGM (2007) (Organiser)

Links: <https://www.youtube.com/live/NiGvyM2sAYs?si=u7zZ4hJsprdsrLpq> | <https://www.youtube.com/live/NdySu1Y-QN8?si=Cb2wB7PlvgqMSLb3>

## LANGUAGE SKILLS

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Mother tongue(s): **Italian**

### Other language(s):

#### English

**LISTENING C1 READING C2 WRITING C2**

**SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2**

#### French

**LISTENING C1 READING C1 WRITING C1**

**SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2**

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## ABILITAZIONE SCIENTIFICA NAZIONALE

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### ASN 2021-2023

[ Current ]

Abilitazione Scientifica Nazionale alle funzioni di professore universitario di Seconda

Fascia nel Settore Concorsuale 05/E2 - BIOLOGIA MOLECOLARE (6/12/2023-6/12/2034)

### ASN2016-2018

[ Current ]

Abilitazione Scientifica Nazionale alle funzioni di professore universitario di Seconda Fascia nel Settore Concorsuale 05/A2 - FISILOGIA VEGETALE (4/4/2018-4/4/2029)

## PUBLICATIONS

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### 2023-2013

- Scintu D, Scacchi E, Cazzaniga F, Vinciarelli F, De Vivo M, Shtin M, Svolacchia N, Bertolotti G, Unterholzner SJ, Del Bianco M, Timmermans M, Di Mambro R, Vittorioso P, Sabatini S, Costantino P, Dello Iorio R. *Commun Biol.* 2023 Aug 11;6(1):834. doi: 10.1038/s42003-023-05201-6.
- Lepri A, Longo C, Messori A, Kazmi H, Madia VN, Di Santo R, Costi R, Vittorioso P. *Plants* (Basel). 2023 Apr 21;12(8):1729. doi: 10.3390/plants12081729.

- Holness S, Bechtold U, Mullineaux P, Serino G, Vittorioso P. *Int J Mol Sci.* 2023 Apr 1;24(7):6608. doi: 10.3390/ijms24076608.
- C. Longo, A. Lepri, A. Paciolla, A. Messori, D. De Vita, M.C. Bonaccorsi di Patti, M. Amadei, V.N. Madia, D. Ialongo, R. Di Santo, R. Costi, P. Vittorioso (2022). *Int J Mol Sci.* vol. 23, p. 1-18, ISSN: 1422-0067, doi: 10.3390/ijms231810446
- Longo C, Holness S, De Angelis V, Lepri A, Occhigrossi S, Ruta V, Vittorioso P. *Genes* (Basel). 2020 Dec 31;12(1):52. doi: 10.3390/genes12010052.
- Bertolotti G., Unterholzner S.J., Scintu D., Salvi E., Svolacchia N., Di Mambro R., Ruta V., Linhares Scaglia F., Vittorioso P., Sabatini S., Costantino P., Dello Iorio R. *Current Biol.* 2020 doi: 10.1016/j.cub. 2020.10.038.
- Ruta V, Longo C, Lepri A, De Angelis V, Occhigrossi S, Costantino P, Vittorioso P. *Plants* (Basel). 2020 Feb 8;9(2): 218. doi: 10.3390/plants9020218.
- Ruta V, Longo C, Boccaccini A, Madia VN, Saccoliti F, Tudino V, Di Santo R, Lorrai R, Dello Iorio R, Sabatini S, Costi R, Costantino P, Vittorioso P. *BMC Plant Biol.* 2019 Oct 16;19(1):429. doi: 10.1186/s12870-019-2057-7.
- Lorrai R, Gandolfi F, Boccaccini A, Ruta V, Possenti M, Tramontano A, Costantino P, Lepore R, Vittorioso P. *Scientific Report* 2018; 8:1-13 (15895). doi: 10.1038/s41598-018-34256-3.
- R. Lorrai, A. Boccaccini, V. Ruta, M. Possenti, Paolo Costantino and Paola Vittorioso. *AoB Plants* 2018; 10(5):ply061, doi: 10.1093/aobpla/ply061
- Boccaccini A, Lorrai R, Ruta V, Frey A, Mercey-Boutet S, Marion-Poll A, Tarkowská D, Strnad M, Costantino P, Vittorioso P. (2016). *BMC Plant Biol.* 9;16(1):198. doi: 10.1186/s12870-016-0890-5.
- Franciosini A, Moubayidin L, Du K, Matari NH, Boccaccini A, Butera S, Vittorioso P, Sabatini S, Jenik PD, Costantino P, Serino G. *Mol Plant.* 2015 2;8(11):1623-34. DOI: 10.1016/j.molp.2015.08.003.
- Santopolo S, Boccaccini A, Lorrai R, Ruta V, Caputo D, Minutello E, Serino G, Costantino P, Vittorioso P (2015) *BMC Plant Biol.* DOI: 10.1186/s12870-015-0453-1.
- Boccaccini A, Santopolo S, Caputo D, Lorrai R, Minutello E, Belcram K, Palauqui JC, Costantino P, Vittorioso P. (2014) *BMC Plant Biol.* Jul 26;14(1):200. DOI: 10.1186/s12870-014-0200-z.
- Boccaccini A., Santopolo S., Caputo D., Minutello E., Lorrai R., Serino G., Costantino P., Vittorioso P. (2014) *Molecular Plant* 7 (9): 1486-1489. doi: 10.1093/mp/ssu046.

## 2013-1988

- Franciosini, A., Lombardi, B., Iafate, S., Pecce, V., Mele, G., Lupacchini, L., Kondou, Y., Gusmaroli, G., Aki, S., Tsuge, T., Deng, X.-W., Matsui, M., Vittorioso, P., Costantino, P. and Serino, G. (2013) *Molecular Plant* 6:1616-1629. DOI: 10.1093/mp/sst045.
- Vittorioso P. "La germinazione dei semi" (2012) XXXVIII Seminario sulla Evoluzione Biologica e i Grandi Problemi della Biologia. Accademia nazionale dei Lincei. Contributi del Centro Linceo Interdisciplinare Beniamino Segre n. 126 Scienze e lettere Editore Commerciale.
- A. Rizza, A. Boccaccini, I. Lopez-Vidriero, P. Costantino and P. Vittorioso (2011) *New Phytol.* Jun;190(4): 896-905. DOI: 10.1111/j.1469-8137.2010.03637.x.
- S. Gabriele, A. Rizza, J. Martone, P. Circelli, P. Costantino, Vittorioso P. (2010). *The Plant J.* 61, 312–323.
- Paz-Ares J., and the REGIA Consortium (2002) *Comp Funct Genom* 2002; 3: 102–108. DOI: 10.1002 / cfg. 146.
- G. Gualberti, M. Papi, L. Bellucci, I. Ricci, D. Bouchez, C. Camilleri, P. Costantino, and P. Vittorioso (2002) *Plant Cell* 14:1253-63.
- M. Papi, S. Sabatini, M.M. Altamura, L. Hennig, E. Schäfer, P. Costantino, and Paola Vittorioso (2002) *Plant Physiol.* 128: 411-417.
- R.J. Carol, A. Breiman, N. Erel, P. Vittorioso, C. Bellini. *Plant Science* 16:527-535 DOI: 10.1016/S0168-9452(01)00437-X.
- M. Papi, S. Sabatini, D. Bouchez, C. Camilleri, P. Costantino, and P. Vittorioso (2000) *Genes & Development* 1:28-33.

- J.D.Faure, P. Vittorioso, V.Santoni, V. Fraasier, E. Prinsen, I. Barriier, H. Van Onckelen, M.Caboche, and C. Bellini (1998) *Development* 125:909-918. PMID: 9449673.
- P. Vittorioso, Cowling R., J.D.Faure, M.Caboche and C.Bellini (1998) *Molecular Cellular Biology* 18:3034-3043. PMID: 9566922.
- D. Bouchez, P.Vittorioso, B.Courtial and C.Camilleri (1996) *Plant Mol. Biol. Rep.* 14:115-123.
- P. Ballario, Vittorioso P., Magrelli A., Talora C., and G.Macino (1996). *EMBO J.* 15:1650-1657. PMID: 8612589. IF 12.6
- P. Vittorioso, A. Carattoli, P. Londei, and G. Macino (1994) *J.Biol.Chem.* 269:26650-26654. PMID: 7929398. • G. Sandmann, Misawa N., Wiedemann M., Vittorioso P., Carattoli A., Morelli G., and G. Macino (1993). *J. Photochem. Photobiol.* 18:245-251. PMID: 8350190.
- P. Morandini, R. Vignola and P. Vittorioso (1990) *Plant nutrition - physiology and applications.* 127-131
- P. Visca, Berlutti F., Vittorioso P., Dalmastri C., Thaller M.C., and P. Valenti (1989). *Medical Microbiology and Immunology.* 178:69-79. PMID: 2733635.
- Dalmastri C., Visca P., Vittorioso P., Valenti P., and Orsi N. (1988). *Microbiologica* 11:225-230. PMID: 2971856

## Patents

- N. Tandeau de Marsac, T. Damerval, P. Vittorioso, J. Houmard, C. Bourgozin "Vesicules à gaz dans *Bacillus thuringiensis*" Patent n° 8902513, registered by Institut National de la Propriété Industrielle (1989)

## OTHER SKILLS

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### Other skills

- Horse riding: expert rider, (FISE 016351/G), she practiced competitive activities at regional and national level (show jumping, cross country).
- Basic Riding Coach for show jumping, dressage, cross country

## TRATTAMENTO DEI DATI PERSONALI

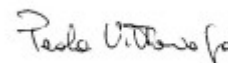
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### Trattamento dei dati personali

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.

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Rome, 03/01/2024



Paola Vittorioso