

## Alma Balestrazzi - Curriculum Vitae

**Current position.** Associate Professor in Plant Physiology - Department of Biology and Biotechnology (DBB) - University of Pavia.

**2000-2014.** Researcher at the Department of Biology and Biotechnology (DBB) - University of Pavia.

**1996-1998.** Post-Doctor Long-Term Fellowship at the University of Pavia.

**1994.** PhD Degree in Genetics and Molecular Biology - University of Pavia. Awarded by a Long-Term fellowship from the National Research Council.

**1991.** EMBO Short-Term Fellowship - "John Innes" Centre for Plant Science Research, Norwich, UK). Guest Scientist Contract sponsored by the European Community.

**1985.** Degree with honours in Biology - University of Pavia.

Co-author of 99 papers *in extenso*, published on international journals peer-reviewed, 14 articles on books and more than 100 communications to International and National Congresses. *h* index (SCOPUS): 22. Citations (SCOPUS): 1508. ORCID CODE: [orcid.org/0000-0003-2003-4120](https://orcid.org/0000-0003-2003-4120). SCOPUS AUTHOR ID: 7003717835

**Referee for international journals** among which Nature Communications, New Phytologist, Journal of Experimental Botany, Plant Journal, Nucleic Acid Research, BMC Plant Biology, Plant Physiology and Biochemistry, Frontiers in Plant Science, Frontiers in Genetics, Scientific Reports, Plant Cell Tissue & Organ Culture, Plant Cell Reports.

**Referee (Grant Evaluation) for international institutions** among which Israel Science Foundation, Human Frontier Science Program-HFSP, Czech Science Foundation, Research Foundation Flanders-FWO, Research Council UK-RCUK.

**ERC Evaluator.** European Research Council - ERC-2016-COG.

**Membership:** International Association for Plant and Cell Tissue Culture & Biotechnology (IAPTC&B), Italian Society of Plant Biology (SIBV), Federation of European Societies of Plant Biology (FESPB), Italian Society of Horticulture (SOI).

### Editorial activity

#### Topic Editor

**2020.** Frontiers in Plant Science - Research Topic: *New insights into seed metabolites: from research*. Topic Editors: M. Chen (Cina), A. Balestrazzi, C. Silva-Sanchez (USA)

<https://www.frontiersin.org/research-topics/12893/>. **2018-2020.** Frontiers in Plant Science - Research Topic: *The maintenance of genome integrity in plants: novel challenges in basic and applied research*. Topic Editors: A Balestrazzi, KO Yoshiyama (Tohoku University, Giappone), AN Sakamoto (Japan Atomic Energy Agency) ([www.frontiersin.org/research-topics/8851](http://www.frontiersin.org/research-topics/8851)).

**2017.** Genes - Special Issue "DNA Damage Responses in Plants", Section "Plant Genetics and Genomics". Topic Editors: A. Balestrazzi, M. Donà (Gregor Mendel Institute - Austrian Academy of Science, Vienna Biocenter), Susana Araujo (Instituto de Tecnologia Química e Biológica António Xavier - ITQB-NOVA, Oeiras, Portugal) ([www.mdpi.com/journal/genes/special\\_issues/](http://www.mdpi.com/journal/genes/special_issues/)).

**2014-2015.** Frontiers in Plant Science - Research Topic: *Maintenance of genome integrity: DNA damage sensing, signaling and repair and replication in plants*. Topic Editors: A Balestrazzi, VMM Achary (ICGEB, India), A. Macovei (IRRI, Filippine), KO Yoshiyama (Kyoto Sangyo University, Giappone), AN Sakamoto (Japan Atomic Energy Agency) ([www.frontiersin.org/research-topics/1612](http://www.frontiersin.org/research-topics/1612)).

#### Book Editor

**2016.** *New Challenges in Seed Biology: Basic and Translational Research Driving Seed Technology* - A Balestrazzi & S. Araujo (Eds), InTech ([www.intechopen.com](http://www.intechopen.com)). ISBN 978-953-51-2659-1. *E-book: Maintenance of Genome Integrity: DNA Damage Sensing, Signaling, Repair, and Replication in Plants*. Editors: Balestrazzi A, Achary

VMM, Macovei A, Yoshiyama KO and Sakamoto AN. Lausanne: Frontiers Media. doi: 10.3389/978-2-88919-820-7

Associate Editor

**Since 2016.** Frontiers in Plant Science/Crop Science and Horticulture ([www.frontiersin.org/journals/plant-science#editorial-board](http://www.frontiersin.org/journals/plant-science#editorial-board)).

**Since 2019.** BMC Plant Biology, Section Reproductive Biology ([https://bmcplantbiol.biomedcentral.com/about/editorial-board?gclid=EAlaIqobChMI2ZPlmMej5gIVA9reCh1P6AlFEAYASACEgKrH\\_D\\_BwE](https://bmcplantbiol.biomedcentral.com/about/editorial-board?gclid=EAlaIqobChMI2ZPlmMej5gIVA9reCh1P6AlFEAYASACEgKrH_D_BwE))

### **Congress/Workshop organization**

**2016.** Session Chair (Plant Development and Disease). XIV FISV Congress. Roma,

**2015.** Member of Scientific Committee - 110° Congresso della Società Botanica Italiana-SBI - II International Plant Science Conference (IPSC). Pavia.

**2012.** Session Chair. Target Meeting “Genome instability and DNA repair” - Online Symposium, 25 Aprile 2012 (<http://www.targetmeeting.com>).

**2000.** Member of Organizing Committee – Riunione Congiunta dei Gruppi di Lavoro Biologia Cellulare e Molecolare e Biotecnologie e Differenziamento della Società Botanica Italiana. Pavia.

### **Invited Speaker**

- Institute of Plant Science, Paris-Saclay, Parigi (Francia). **2019.** *Understanding how seeds cope with genotoxic stress: a case study in Medicago truncatula.*
- Institute of Plant Genetics - Polish Academy of Science. *Integrative Plant Biology IPG PAS Conference*, Poznan (Polonia). **2018.** *The DNA damage response in the context of seed germination: lesson from the model legume Medicago truncatula.*
- CREA - Centro di Ricerca per la Genomica e la Bioinformatica. Fiorenzuola d’Arda (Parma). **2017.** *Role of tyrosyl-DNA phosphodiesterases in DNA damage response and seed quality.*
- CEITEC - Central European Institute of Technology. Brno (Czech Republic). **2016.** *Role of tyrosyl-DNA phosphodiesterases in DNA damage response and abiotic stress tolerance.*
- Academy of the Sciences of the Czech Republic, Institute of Experimental Botany. Prague (Czech Republic). **2016.** *Role of tyrosyl-DNA phosphodiesterases in DNA damage response and abiotic stress tolerance.*
- Workshop: Innovation and tradition in the Agrifood Industry. Pavia. **2016.** *Seed priming.*
- ASSOSEMENTI, Incontro tecnico di aggiornamento su produzione sementiera e controlli fitosanitari. Bologna, **2014.** *La qualità delle sementi: analisi molecolari per la diagnosi precoce del vigore del seme.*
- Incontri ASSOSEMENTI/Road to Quality - MACFRUT, Cesena, **2013.** *La qualità delle sementi: analisi molecolari per la diagnosi precoce del vigore del seme.*
- V° Scuola di Fisiopatologia Vegetale. Pieve Tesino (Trento), **2013.** *Preserving genome stability during the defense response: role of phytohormones.*
- Summerschool of Floriculture - Facoltà di Agraria dell’Università degli Studi di Torino. Sanremo, **2012.** *Mutation Breeding.*
- Target Meeting “Genome instability and DNA repair” - Online Symposium, 25 Aprile **2012** (<http://www.targetmeeting.com>). *Plant cells exposed to gamma rays: dynamics of DNA damage and repair as a function of dose rate.*
- Target Meeting “Mechanisms of DNA damage and repair” - Online Symposium, 13 Maggio **2011** (<http://www.targetmeeting.com>). *DNA repair and stress tolerance in plants: recent advances in the model legume Medicago truncatula.*
- Fondazione Biotecnologie, Torino/Villa Gualino, **2002.** *Strategie per l’ottenimento di piante transgeniche di pioppo che esprimono geni di sterilità sessuale.*

### **Responsabilità scientifica per progetti di ricerca internazionali e nazionali**

- “Understanding kinetin-mediated seed priming in *Medicago truncatula* to disclose novel hallmarks of seed vigour” (2019-2021). ID progetto: EPIC-XS-0000059, Union Horizon 2020 Work programme, European Proteomics Infrastructure Consortium-Providing Access (EPIC-XS). Principal Investigator.
- “Biofuels from cellulose: production of hydrolytic enzymes targeting the cell wall polysaccharides for the release of fermentable carbohydrates” – Development of dedicated seed priming protocols (2018-2019). Fondazione Branca Buscolera. Principal Investigator.
- “Seed wake-up with aptamers: a new technology for dormancy release and improved seed priming strategy (WAKE-APT)” (2017-2020). ID progetto: Rif. 2016-0723 Fondazione CARIPOLO. Head of Research Unit.
- “Azione 1-Tecnologie Avanzate di Seed Priming per l’Industria Agro-Sementiera Lombarda (PRIMTECH)” ([www.unipv.it/primtech](http://www.unipv.it/primtech)) (2014-2015). ID progetto: 43448533 (2013-03939), Lombardy Region. Project Coordinator.
- “Azione 2-Tecnologie Avanzate di Seed Priming per l’Industria Agro-Sementiera Lombarda (PRIMTECH)” ([www.unipv.it/primtech](http://www.unipv.it/primtech)) (2014-2015). ID progetto: 46547514, Lombardy Region. Project Coordinator.
- “Azione 3-Tecnologie Avanzate di Seed Priming per l’Industria Agro-Sementiera Lombarda (PRIMTECH)” ([www.unipv.it/primtech](http://www.unipv.it/primtech)) (2014-2015). ID progetto: Rif. 2013-1727, Fondazione CARIPOLO. Project Coordinator.
- “Conservazione, caratterizzazione e induzione di variabilità in rosa al fine di ottimizzare il lavoro di ibridazione e la costituzione varietale (MUTROS)” (2011-2012) MPAAF (Bando OIGA-Osservatorio per l’Imprenditorialità Giovanile in Agricoltura). National Coordinator.
- “Dialogo tra organelli nelle risposte di difesa agli stress ossidativi e nella morte cellulare programmata nelle piante” (2004-2006) PRIN-MIUR. Head of Research Unit

#### **Partecipazione a progetti di ricerca internazionali e nazionali**

- **COST Action CA16212** - *Impact of Nuclear Domains On Gene Expression and Plant Traits* (2017-2021) (<https://www.cost.eu/actions/CA16212/>).
- “Unraveling post-transcriptional regulation of seed development in common bean” (2016-2018) Fundação para a Ciência e Tecnologia. (SFRH/BPD/108032/2015 - Principal Investigator Dott. Susana Araujo). Co-supervisor of research activity.
- **COST Action FA1306** - *The Quest for Tolerant and Stable Varieties - Phenotyping at Plant and Cellular Level* (2013-2017) ([www.cost.eu/COST\\_Actions/fa/FA1306](http://www.cost.eu/COST_Actions/fa/FA1306)).
- “The Native Seed Science, Technology and Conservation Initial Training Network (NASSTEC)” (2013-2016) ([www.nasstec.eu](http://www.nasstec.eu)) “Marie Curie Multi-Partner Initial Training Network-ITN”. PhD management: ESR joint supervision (Alma Balestrazzi, Hugh Pritchard).
- **COST Action CM1201** - *Biomimetic Radical Chemistry* (2012-2016) ([www.cost.eu/COST\\_Actions/cmst/CM1201](http://www.cost.eu/COST_Actions/cmst/CM1201))

#### **Teaching activity**

##### **Bachelor and Master Degrees.**

1997/1998. Plant Biotechnology, University of Ferrara. 2001/2004. Plant Biotechnology, University of Pavia. 2005/2020. Plant Biotechnology and Plant Physiology, University of Pavia. Plant Molecular Physiology, University of Modena and Reggio Emilia. 2007/2010. Plant Physiology, University of Pavia. 2009/2016. Molecular Techniques for the Conservation of Biodiversity, University of Pavia. 2014/2020. Plant Molecular Biology and Biotechnology, University of Pavia. 2015/2020. Applied Plant Molecular Techniques and Laboratory, University of Pavia.

##### **PhD.**

2008-2020. Doctorate program in Genetics, Molecular and Cellular Biology, University of Pavia - Member of the Proponents Board, PhD thesis supervision.

External Supervisor

From 2015. International PhD Plants for Life ITQB-Nuova Università di Lisbona (Oeiras-Portogallo), progetto PD/BD/13474/2015. "*Unraveling seed development in Phaseolus vulgaris L.*". PhD student: José Salvado.

External Referee

2019. PhD Doctoral School, Faculty of Biology, University of Innsbruck (Austria). 2014. PhD Program of the Faculty of Life Science (Biotechnology), Guru Nanak Dev University, Amritsar (Punjab), India. 2012. PhD Program of the Faculty of Life Science, Guru Nanak Dev University, Amritsar (Punjab), India.