

CURRICULUM VITAE

Tomas Morosinotto

Research Activity:

2018 – date: Full professor in Plant Physiology at the Biology Department at the University of Padova. Present research focuses on the study of photosynthesis in different organisms investigating how evolution shaped the regulation of this metabolic process going from algae, mosses and plants. Information from basic research is exploited for the development of application of algae for production of biomolecules. The objective of the research is to improve algae efficiency in converting light into biomass. Key limiting steps of photosynthesis are being identified by integrating biophysical, biochemical and functional investigation of algae photosynthetic apparatus with genome, transcriptome, lipidome and metabolome analysis. Information obtained are exploited to develop genetically engineered strains with improved productivity. This project was awarded in 2012 of an ERC starting Grant entitled : “BioLEAP— Biotechnological optimization of light use efficiency in algae photobioreactors”.

At present I am supervising the work of three PhD students, three post-docs, one technician as well as five master students.

2014-2017: Associate Professor in Biochemistry at the Biology Department at the University of Padova

2007 – 2013 : Assistant professor in Biochemistry at the Sciences faculty of University of Padua.

October 2005 – 2006: Permanent CNRS researcher working at the LGBP (Laboratoire de Biophysique et Génétique des Plantes) in the science Faculty, Marseille, (France). Research activity was dedicated to enzymes of carotenoid biosynthesis. Renounced to the position, opting for a position as assistant professor at University of Padua.

2005 – September 2005: Post-doc (grant awarded by the French Research ministry on a research proposal) working at LBC (directed by Dr. David Pignol) at DEVM, CEA, Cadarache (France). The objective of the work was the structural characterization by X-ray crystallography of violaxanthin deepoxidase (VDE), the enzyme responsible for zeaxanthin synthesis in plants. Contract was ended early, opting for a permanent position as researcher.

2002 / 31st January 2005: PhD thesis under the supervision of Prof. Bassi, entitled: “Light Harvesting Complexes in Higher Plants: Role, Organization and Regulation”. The main subject was the characterization of the antenna system of Photosystem I.

Teaching Activity.

Current teaching activities, all lectures:

- Biotechnology for Bioenergy production (32 Hours), Msc in Industrial Biotechnology (in English)
- Advanced Biochemistry (16 H), Msc in Molecular Biology (in English)
- Plant Ecophysiology (48 H), Msc in evolutionary Biology
- Introduction to Plant Physiology (16 H), Bsc in Molecular Biology

Since 2007: Supervisor of > 40 Master degree students (9 months of laboratory experience) in Molecular Biology/ Biotechnology/ Evolutionary Biology, University of Padua.

PUBLICATIONS IN INTERNATIONAL JOURNALS WITH PEER REVIEW

Publication statistics:

104 publications in peer-reviewed journals, 11 as first author, 35 as last, 32 as corresponding author; H index (from ISI web of science) 38

Five selected recent papers:

103. Storti M, Segalla A, Mellon M, Alboresi A, **Morosinotto T**. Regulation of electron transport is essential for photosystem I stability and plant growth. *New Phytol.* 2020. doi: 10.1111/nph.16643. Online ahead of print.
92. Alboresi A, Storti M, **Morosinotto T***. Balancing protection and efficiency in the regulation of photosynthetic electron transport across plant evolution. *New Phytol.* 2019 221(1):105-109. * Author for correspondence
87. Larosa V, Meneghesso A, La Rocca N, Steinbeck J, Hippler M, Szabo I, **Morosinotto T.*** Mitochondria affects photosynthetic electron transport and photo-sensitivity in a green alga. *Plant Physiol.* 2018 176(3):2305-2314
86. Perin G, Bernardi A, Bellan A, Bezzo F and **Morosinotto T*** A Mathematical model to guide Genetic Engineering of Photosynthetic Metabolism. *Metabolic Engineering* 2017 44:337-347 * Author for correspondence
76. Gerotto C, Alboresi A, Meneghesso A, Jokel M, Suorsa M, Aro EM, **Morosinotto T***, Flavodiiron proteins act as safety valve for electrons in *Physcomitrella patens*. *PNAS* 2016 113(43):12322-12327 * Author for correspondence

PATENTS

2020: Miglio Roberta, Morosinotto Tomas, Bellan Alessandra. WIPO Patent Application WO/2020/115692. "Microalgal strain and its use for the production of lipids"

2019: Maron Nicola, Morosinotto Tomas, Simionato Diana. WIPO Patent Application WO/2019/244177. "Cultivation method for microalgae"

Maron Nicola, Morosinotto Tomas, Simionato Diana. WIPO Patent Application WO/2019/244178. "Plant for the cultivation of algae, preferably microalgae".

AWARDS:

2014: - "Baccarani-Melandri" award presented by the Italian Society of Plant Biology to "a young researcher providing a personal, relevant, contribution to the development of plant physiology in Italy"

2010: - “Vincenzo Caglioti” award presented by the Accademia Nazionale dei Lincei as a young researcher in Chemistry.

- “Robin Hill” award presented by the International Society of Photosynthesis as a young scientist (under 40) in photosynthesis.

2002: “Laura Polo” award presented by the Italian Society of Photobiology attributed for the best Master thesis in Photobiology in 2000-2001

EVALUATION/REVIEWER /EDITORIAL DUTIES

2016, 2017, 2017 - Member of the evaluation committee of ANR (French National Research Agency), Panel on Energy and sustainable development / bioeconomy

2019 – present : Associate Editor for Biotechnology for Biofuels and Frontiers in plant sciences (section Marine and Freshwater Plants).

2014 – 2019: Associate Editor, BMC plant Biology;

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

Member of the International Society of Photosynthesis Research; Italian Society of Photobiology; Italian Society of Plant Biology (2015-2019 elected member of the steering board);