CURRICULUM VITAE

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Research Activity:

2021 – date: Director (*Prefetto*) of the Botanical Garden of the University of Padova.

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 to develop genetically engineered algal strains and plants with improved photosynthetic efficiency and biomass productivity. At present the research group is composed by 7 PhD students, 3 post docs, 2 technicians 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)
- Biorefineries and sustainable energy production and storage for circular economy (72 H), Msc in Sustainable chemistry and technologies for circular economy (in English).
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Past teaching:

2014 – 2017: "Structural Biochemistry" to Bsc in Molecular Biology (56 H Lectures, 16 H practice)

2006 - 2010 : "Methods in Biochemistry" (40 H lectures, 16 H practice) Bsc in Molecular Biology

2006: Course in "plants response to environment" (20 hours, in French) in the biology degree in the Université de la Mediterranée, Marseille, France.

Teaching Organization:

2014-2017: member of the steering committee Bsc and Msc in Molecular Biology

2018 -2022: steering committee of Msc in Industrial Biotechnology

Since 2007: Supervisor of > 60 Master degree students (9 months of laboratory experience) in Molecular Biology/ Biotechnology/ Evolutionary Biology, University of Padua. > 40% of them continued with a PhD in various institutions.

PUBBLICATIONS IN INTERNATIONAL JOURNALS WITH PEER REVIEW

Publication statistics:

134 publications in peer-reviewed journals, 11 as first author, 47 as last or corresponding author; Sum of Times Cited 6,629; H index (from ISI web of science) 45; 10 major publications as senior author in the past 10 years are in bold.

135. Vera-Vives AM, Mellon M, Gurrieri L, Westhoff P, Segalla A, Tan SL, Bizzotto E, Campanaro S, Sparla F, Weber APM, Alboresi A, Morosinotto T. Cytochrome c oxidase inactivation in Physcomitrium patens reveals that respiration coordinates plant metabolism. Plant Cell. 2025 doi: 10.1093/plcell/koaf101.

134. Traverso E, Beraldo C, Armellin M, Alboresi A, Morosinotto T. Flavodiiron proteins in Physcomitrium patens: navigating the edge between photoprotection and efficiency. Plant J. 2025 Feb;121(4):e70052. doi: 10.1111/tpj.70052.

133. Pesaresi P, Bono P, Corn S, Crosatti C, Daniotti S, Jensen JD, Frébort I, Groli E, Halpin C, Hansson M, Hensel G, Horner DS, Houston K, Jahoor A, Klíma M, Kollist H, Lacoste C, Laidoudi B, Larocca S, Marè C, Moigne NL, Mizzotti C, **Morosinotto T,** Oldach K, Rossini L, Raubach S, Sanchez-Garcia M, Shaw PD, Sonnier R, Tondelli A, Waugh R, Weber APM, Yarmolinsky D, Zeni A, Cattivelli L. Boosting photosynthesis opens new opportunities for agriculture sustainability and circular economy: The BEST-CROP research and innovation action. Plant J. 2025 Feb;121(3):e17264. doi: 10.1111/tpj.17264.

132. Beraldo C, Traverso E, Boschin M, Cendron L, **Morosinotto T**, Alboresi A. Physcomitrium patens flavodiiron proteins form heterotetrametric complexes. J Biol Chem. 2024 Sep;300(9):107643. doi: 10.1016/j.jbc.2024.107643.

131. Santin A, Collura F, Singh G, Morlino MS, Bizzotto E, Bellan A, Gupte AP, Favaro L, Campanaro S, Treu L, **Morosinotto T.** Deciphering the genetic landscape of enhanced poly-3-hydroxybutyrate production in Synechocystis sp. B12. Biotechnol Biofuels Bioprod. 2024 Jul 16;17(1):101. doi: 10.1186/s13068-024-02548-8.

130. Santin A, Spatola Rossi T, Morlino MS, Gupte AP, Favaro L, **Morosinotto T**, Treu L, Campanaro S. Autotrophic poly-3-hydroxybutyrate accumulation in Cupriavidus necator for sustainable bioplastic production triggered by nutrient starvation. Bioresour Technol. 2024 Aug;406:131068. doi: 10.1016/j.biortech.2024.131068.

129. Vera-Vives AM, Novel P, Zheng K, Tan SL, Schwarzländer M, Alboresi A, Morosinotto T. Mitochondrial respiration is essential for photosynthesis-dependent ATP supply of the plant cytosol. New Phytol. 2024 Sep;243(6):2175-2186. doi: 10.1111/nph.19989.

128. Natale S, Peralta Ogorek LL, Caracciolo L, **Morosinotto T**, van Amerongen H, Casolo V, Pedersen O, Nardini A. Net O2 exchange rates under dark and light conditions across different stem compartments. New Phytol. 2024 Jul;243(1):72-81. doi: 10.1111/nph.19782.

127. Serna-García R, Silvia Morlino M, Bucci L, Savio F, Favaro L, **Morosinotto T**, Seco A, Bouzas A, Campanaro S, Treu L. Biological carbon capture from biogas streams: Insights into Cupriavidus necator autotrophic growth and transcriptional profile. Bioresour Technol. 2024 Mar 7;399:130556. doi: 10.1016/j.biortech.2024.130556.

126. Vera-Vives AM, Michelberger T, **Morosinotto T**, Perin G. Assessment of photosynthetic activity in dense microalgae cultures using oxygen production. Plant Physiol Biochem. 2024 Mar 7;208:108510. doi: 10.1016/j.plaphy.2024.108510.

125. Perin G, **Morosinotto T.*** Understanding Regulation in Complex Environments: A Route to Enhance Photosynthetic Light-Reactions in Microalgae Photobioreactors. Frontiers in Photobiology. 2023 https://doi.org/10.3389/fphbi.2023.1274525

124. Morlino MS, Serna García R, Savio F, Zampieri G, **Morosinotto T**, Treu L, Campanaro S. Cupriavidus necator as a platform for polyhydroxyalkanoate production: An overview of strains, metabolism, and modeling approaches. Biotechnol Adv. 2023 Dec;69:108264. doi: 10.1016/j.biotechadv.2023.108264.

123. Smith EN, van Aalst M, Tosens T, Niinemets Ü, Stich B, **Morosinotto T**, Alboresi A, Erb T, Gómez-Coronado PA, Tolleter D, Finazzi G, Curien G, Heinemann M, Ebenhöh O, Hibberd JM, Schlüter U, Sun T, Weber APM. Improving photosynthetic efficiency toward food security: Strategies, advances, and perspectives. Mol Plant. 2023 Sep 1:S1674-2052(23)00252-6. doi: 10.1016/j.molp.2023.08.017.

122. Perin G, Bellan A, Michelberger T, Lyska D, Wakao S, Niyogi KK, Morosinotto T*. Modulation of xanthophyll cycle impacts biomass productivity in the marine microalga Nannochloropsis. Proc Natl Acad Sci U S A. 2023 Jun 20;120(25):e2214119120. doi: 10.1073/pnas.2214119120.

121. Natale S, Petruzzellis F, Alboresi A, **Morosinotto T**, Nardini A. Stem photosynthetic efficiency across woody angiosperms and gymnosperms with contrasting drought tolerance., Trees - Structure and Function, 2023, 37(4), pp. 1167–1177

120. Natale S, La Rocca N, Battistuzzi M, **Morosinotto T**, Nardini A, Alboresi A. Structure and function of bark and wood chloroplasts in a drought tolerant tree (Fraxinus ornus L.).Tree Physiol. 2023 Feb 4:tpad013. doi: 10.1093/treephys/tpad013.

119. Battistuzzi M, Cocola L, Claudi R, Pozzer AC, Segalla A, Simionato D, **Morosinotto T**, Poletto L, La Rocca N. Oxygenic photosynthetic responses of cyanobacteria exposed under an M-dwarf starlight simulator: Implications for exoplanet's habitability. Front Plant Sci. 2023 Feb 7;14:1070359. doi: 10.3389/fpls.2023.1070359.

118. Beraldo C, Guyon-Debast A, Alboresi A, Nogué F, Morosinotto T. Functional analysis of PsbS transmembrane domains through base editing in Physcomitrium patens. Plant J. 2023 Mar;113(5):1049-1061. doi: 10.1111/tpj.16099.

117. Fattore N, Bucci F, Bellan A, Bossi S, Maffei ME, **Morosinotto T**. An increase in the membrane lipids recycling by PDAT overexpression stimulates the accumulation of triacylglycerol in Nannochloropsis gaditana. J Biotechnol. 2022 Sep 20;357:28-37. doi: 10.1016/j.jbiotec.2022.07.007. Epub 2022 Aug 2.

116. Gerotto C, Trotta A, Bajwa AA, **Morosinotto T**, Aro EM. Role of Serine/Threonine Protein Kinase Stn7 in the Formation of Two Distinct Photosystem I Supercomplexes in Physcomitrium patens. Plant Physiol. 2022 Jun 23:kiac294. doi: 10.1093/plphys/kiac294.

115. Perin G, Gambaro F, **Morosinotto T.*** Knowledge of Regulation of Photosynthesis in Outdoor Microalgae Cultures Is Essential for the Optimization of Biomass Productivity. Front Plant Sci. 2022 Apr 4;13:846496. doi: 10.3389/fpls.2022.846496.

114. Azadi-Chegeni F, Thallmair S, Ward ME, Perin G, Marrink SJ, Baldus M, **Morosinotto T**, Pandit A. Protein dynamics and lipid affinity of monomeric, zeaxanthin-binding LHCII in thylakoid membranes. Biophys J. 2022 Feb 1;121(3):396-409. doi: 10.1016/j.bpj.2021.12.039.

113. Dlouhý O, Karlický V, Arshad R, Zsiros O, Domonkos I, Kurasová I, Wacha AF, **Morosinotto T**, Bóta A, Kouril R, Špunda V, Garab G. Lipid Polymorphism of the Subchloroplast—Granum and Stroma Thylakoid Membrane–Particles. II. Structure and Functions. Cells 2021, 10, 2363. https://doi.org/10.3390/

112. Sciuto K, Moschin E, Fattore N, **Morosinotto T**, Moro I. A new cryptic species of the unicellular red algal genus Dixoniella (Rhodellophyceae, Proteorhodophytina): Dixoniella giordanoi, Phycologia, 2021, 60 (5) 524-531 doi: 10.1080/00318884.2021.1984090
111. Fattore N, Savio S, Vera-Vives AM, Battistuzzi M, Moro I, La Rocca N, **Morosinotto T***. Acclimation of photosynthetic apparatus in the mesophilic red alga Dixoniella giordanii Physiol Plant 2021 173(3):805-817
110. Fattore N, Bellan A, Pedroletti L, Vitulo N, **Morosinotto T***. Acclimation of photosynthesis and lipids biosynthesis to prolonged nitrogen and phosphorus limitation in Nannochloropsis gaditana Algal Research, 2021, 58, 102368
109. Mellon M, Storti M, Vera-Vives AM, Kramer DM, Alboresi A, Morosinotto T*. Inactivation of mitochondrial Complex I stimulates chloroplast ATPase in Physcomitrium patens Plant Physiol. 2021 187(2):931-946 https://doi.org/10.1093/plphys/kiab276
108. Lu Y, Gan Q, Iwai M, Alboresi A, Burlacot A, Dautermann O, Takahashi H, Crisanto T, Peltier G, **Morosinotto T**, Melis A, Niyogi KK. Role of an ancient light-harvesting protein of PSI in light absorption and photoprotection. Nat Commun. 2021 Jan 29;12(1):679. 2
107. Guyon-Debast A, Alboresi A, Terret Z, Charlot F, Berthier F, Vendrell-Mir P, Casacuberta JM, Veillet F, Morosinotto T, Gallois JL, Nogué F. A blueprint for gene function analysis through Base Editing in the model plant Physcomitrium (Physcomitrella) patens. New Phytol. 2021 Jan 9.
106. Azadi-Chegeni F, Ward ME, Perin G, Simionato D, **Morosinotto T**, Baldus M, Pandit A. Conformational dynamics of Light-Harvesting Complex II in a native membrane environment. Biophys J. 2020 Dec 4:S0006-3495(20)33173-8. doi: 10.1016/j.bpj.2020.11.2265.
105. Gracioso LH, Bellan A, Karolski B, Cardoso LOB, Perpetuo EA, Nascimento CAOD, Giudici R, Pizzocchero V, Basaglia M, Morosinotto T. Light excess stimulates Poly-beta-hydroxybutyrate yield in a mangrove-isolated strain of Synechocystis sp. Bioresour Technol. 2021 Jan;320(Pt B):124379. doi: 10.1016/j.biortech.2020.124379.
104. Storti M, Puggioni MP, Segalla A, **Morosinotto T**, Alboresi A. The chloroplast NADH dehydrogenase-like complex influences the photosynthetic activity of the moss Physcomitrella patens. J Exp Bot. 2020;71(18):5538-5548. doi: 10.1093/jxb/eraa274.
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. Nov;228(4):1316-1326. doi: 10.1111/nph.16643.**
102. Barbato R, Tadini L, Cannata R, Peracchio C, Jeran N, Alboresi A, **Morosinotto T**, Bajwa AA, Paakkarinen V, Suorsa M, Aro EM, Pesaresi P. Higher order photoprotection mutants reveal the importance of ΔpH-dependent photosynthesis-control in preventing light induced damage to both photosystem II and photosystem I. Sci Rep. 2020;10(1):6770. doi: 10.1038/s41598-020-62717-1.
101. Battistuzzi M, Cocola L, Salasnich B, Erculiani S, Alei E, **Morosinotto T**, Claudi R, Poletto L and La Rocca R. A new remote sensing-based system for the monitoring and analysis of growth and gas exchange rates of photosynthetic microorganisms under simulated non-terrestrial conditions" - «Frontiers in Plant Science. Frontiers in Plant Sciences 2020 doi: 10.3389/fpls.2020.00182
100. Bellan A, Bucci F, Perin G, Alboresi A, **Morosinotto T***. Photosynthesis regulation in response to fluctuating light in the secondary endosymbiont alga *Nannochloropsis gaditana*. Plant Cell Physiol. 2019 in press doi: 10.1093/pcp/pcz174. * Author for correspondence
99. Castaldello C, Sforza E, Cimetta E, **Morosinotto T**, Bezzo F. Microfluidic Platform for Microalgae Cultivation under Non-limiting CO_2 Conditions. Industrial and Engineering Chemistry Research 2019 58(39): 18036-18045

98. Alboresi A, Storti M, Cendron L, **Morosinotto T**. Role and regulation of class-C flavodiiron proteins in photosynthetic organisms. Biochem J. 2019 476(17):2487-2498.
97. Gerotto C, Trotta A, Bajwa AA, Mancini I, **Morosinotto T**, Aro EM. Thylakoid protein phosphorylation dynamics in a moss mutant lacking serine/threonine protein kinase STN8. Plant Physiol. 2019 180(3):1582-1597
96. Albarello A, Simionato D, **Morosinotto T**, Bezzo F. Model-Based Optimization of Microalgae Growth in a Batch Plant. Industrial and Engineering Chemistry Research 2019 58(13), 5121-5130
95. Sello S, Meneghesso A, Alboresi A, Baldan B, **Morosinotto T***. Plant biodiversity and regulation of photosynthesis in the natural environment. Planta. 2019 249(4):1217-1228. * Author for correspondence
94. Perin G, Bellan A, Bernardi A, Bezzo F, Morosinotto T*. The potential of quantitative models to improve microalgae photosynthetic efficiency. Physiol Plant. 2019 166(1), 380-391 * Author for correspondence
93. Storti M, Alboresi A, Gerotto C, Aro EM, Finazzi G, Morosinotto T*. Role of cyclic and pseudo-cyclic electron transport in response to dynamic light changes in Physcomitrella patens. Plant Cell Environ. 2019 42(5), 1590-1602
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.**
91. Allorent G, Byrdin M, Carraretto L, ***Morosinotto T***, Szabo I, Finazzi G. Global spectroscopic analysis to study the regulation of the photosynthetic proton motive force: A critical reappraisal. Biochim Biophys Acta Bioenerg. 2018 1859(9):676-683.
90. De Luca R, Bernardi A, Meneghesso A, ***Morosinotto T***, Bezzo F Modelling the photosynthetic electron transport chain in Nannochloropsis gaditana via exploitation of absorbance data. Algal Research *2018* 33, 430-439
89. Storti M, Costa A, Golin S, Zottini M, ***Morosinotto T***, Alboresi A. Systemic Calcium Wave Propagation in Physcomitrella patens. Plant Cell Physiol. 2018 59(7):1377-1384.
88. Formentin E, Sudiro C, Perin G, Riccadonna S, Barizza E, Baldoni E, Lavezzo E, Stevanato P, Sacchi GA, Fontana P, Toppo S, ***Morosinotto T***, Zottini M, Lo Schiavo F. Transcriptome and Cell Physiological Analyses in Different Rice Cultivars Provide New Insights Into Adaptive and Salinity Stress Responses. Front Plant Sci. 2018 9:204.
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
85. Perin G, Simionato D, Bellan A, Carone M, Occhipinti A, Maffei ME, ***Morosinotto T**** Cultivation in Industrially Relevant Conditions Has a Strong Influence on Biological Properties and Performances of Nannochloropsis gaditana Genetically Modified Strains. Algal Research *2017,* 259:63-72. * Author for correspondence
84. Bernardi A, Nikolaou A, Meneghesso A, Chachuat B, **Morosinotto T**, Bezzo F. Semi-empirical modeling of microalgae photosynthesis in different acclimation states - Application to *N. gaditana*. J Biotechnol. 2017 Oct 10;259:63-72
83. Chukhutsina VU, Fristedt R, ***Morosinotto T***, Croce R. Photoprotection strategies of the alga Nannochloropsis gaditana. Biochim Biophys Acta. 2017 1858(7):544-552.

82. Gris B, Sforza E, ***Morosinotto T***, Bertucco A, La Rocca N. Influence of light and temperature on growth and high value molecules productivity from Cyanobacterium aponinum. Journal of Applied Phycology *2017* 29 (4): 1781–1790
81. Ilík P, Pavlovič A, Kouřil R, Alboresi A, ***Morosinotto T***, Allahverdiyeva Y, Aro EM, Yamamoto H, Shikanai T. Alternative electron transport mediated by flavodiiron proteins is operational in organisms from cyanobacteria up to gymnosperms. New Phytol. *2017* May;214(3):967-972.
80. Squarcina A, Sorarù A, Rigodanza F, Carraro M, Brancatelli G, Carofiglio T, Geremia S, Larosa V, ***Morosinotto T***, Bonchio M. Merged Heme and Non-Heme Manganese Cofactors for a Dual Antioxidant Surveillance in Photosynthetic Organisms. ACS Catalysis *2017* 7(3): 1971-1976
79. Dolch LJ, Rak C, Perin G, Tourcier G, Broughton R, Leterrier M, ***Morosinotto T***, Tellier F, Faure JD, Falconet D, Jouhet J, Sayanova O, Beaudoin F, Marechal E. A palmitic acid elongase affects eicosapentaenoic acid and plastidal monogalactosyldiacylglcerol levels in Nannochloropsis. Plant Physiol. 2017 Jan;173(1):742-759.
78. Teymouri A, Barbera E, Sforza E, ***Morosinotto T***, Bertucco A, Kumar S. Integration of Biofuels Intermediates Production and Nutrients Recycling in the Processing of a Marine Algae. AIChE Journal *2017* 63(5): 1494-1502.
77. Azadi Chegeni F, Perin G, Sai Sankar Gupta KB, Simionato D, ***Morosinotto T***, Pandit A. Protein and lipid dynamics in photosynthetic thylakoid membranes investigated by in-situ solid-state NMR. Biochim Biophys Acta. 2016 1857(12):1849-1859.
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**
75. Perin G, Cimetta E, Monetti F, ***Morosinotto T***, Bezzo F. Novel micro-photobioreactor design and monitoring method for assessing microalgae response to light intensity. Algal Research *2016* 19: 69-76
74. De Bortoli S, Teardo E, Szabò I, ***Morosinotto T***, Alboresi A. Evolutionary insight into the ionotropic glutamate receptor superfamily of photosynthetic organisms. Biophys Chem. *2016* 218:14-26.
73. Meneghesso A, Simionato D, Gerotto C, La Rocca N, Finazzi G, ***Morosinotto T*.*** Photoacclimation of photosynthesis in the Eustigmatophycean *Nannochloropsis gaditana*. Photosynth Res. *2016* 129(3):291-305. * Author for correspondence
72. Alboresi A, Le Quiniou C, Yadav SKN, Scholz M, Meneghesso A, Gerotto C, Simionato D, Hippler M, Boekema EJ, Croce R and ***Morosinotto T*.*** Conservation of core complex subunits shaped structure and function of Photosystem I in the secondary endosymbiont alga *Nannochloropsis gaditana*. New Phytologist *2017* 213(2):714-726. * Author for correspondence
71. Albanese P, Manfredi M, Meneghesso A, Marengo E, Saracco G, Barber J, ***Morosinotto T***, Pagliano C. Dynamic reorganization of photosystem II supercomplexes in response to variations in light intensities. Biochim Biophys Acta. *2016* 1857(10):1651-60
70. **Alboresi A, Perin G, Vitulo N, Diretto G, Block MA, Jouhet J, Meneghesso A, Valle G, Giuliano G, Maréchal E, *Morosinotto T**. Light Remodels Lipid Biosynthesis in Nannochloropsis gaditana by Modulating Carbon Partitioning Between Organelles. Plant Physiol. *2016* 171(4):2468-82 * Author for correspondence**
69. Bernardi A, Nikolaou A, Meneghesso A, ***Morosinotto T***, Chachuat B, Bezzo F. High-Fidelity Modelling Methodology of Light-Limited Photosynthetic Production in Microalgae. PLoS One. *2016* 7;11(4):e0152387.
68. Barbera E, Sforza E, Kumar S, ***Morosinotto T***, Bertucco A. Cultivation of Scenedesmus obliquus in liquid hydrolysate from flash hydrolysis for nutrient recycling. Bioresour Technol. *2016* 207:59-66.

67. **Perin G, Bellan A, Segalla A, Meneghesso A, Alboresi A and *Morosinotto T** Generation of random mutants to improve light-use efficiency of Nannochloropsis gaditana cultures for biofuel production Biotec for Biofuels *2015* 8:161 * Author for correspondence**
66. Sforza E, Calvaruso C, Meneghesso A, ***Morosinotto T***, Bertucco A. Effect of specific light supply rate on photosynthetic efficiency of Nannochloropsis salina in a continuous flat plate photobioreactor. Appl Microbiol Biotechnol. *2015* 99(19):8309-18.
65. Gerotto C, Franchin C, Arrigoni G, *Morosinotto T**. In vivo Identification of Photosystem II Light Harvesting Complexes Interacting with PSBS. Plant Physiol. *2015* 168(4):1747-61 * Author for correspondence
64. Simionato D, Basso S, Zaffagnini M, Lana T, Marzotto F, Trost P, ***Morosinotto T****. Protein redox regulation in the thylakoid lumen: The importance of disulfide bonds for violaxanthin de-epoxidase. FEBS Lett. *2015* 589(8):919-23. *Author for correspondence
63. Nikolaou A, Bernardi A, Meneghesso A, Bezzo F, ***Morosinotto T***, Chachuat B. A model of chlorophyll fluorescence in microalgae integrating photoproduction, photoinhibition and photoregulation. J Biotechnol. *2015* Jan 20;194:91-9. doi: 10.1016/j.jbiotec.2014.12.001. Epub 2014 Dec 16.
62. Ferrigo D, Galla G, Sforza E, ***Morosinotto T***, Barcaccia G, Ceschi Berrini C. Biochemical characterization and genetic identity of an oil-rich Acutodesmus obliquus isolate Journal of Applied Phycology *2015* 27 (1): 149-161
61. La Rocca N, Sciuto K, Meneghesso A, Moro I, Rascio N, ***Morosinotto T***. Photosynthesis in extreme environments: responses to different light regimes in the Antarctic alga Koliella antarctica. Physiol Plant. *2015* Apr;153(4):654-67
60. Carbonera D, Agostini A, Di Valentin M, Gerotto C, Basso S, Giacometti GM, ***Morosinotto T***. Photoprotective sites in the violaxanthin-chlorophyll a binding Protein (VCP) from Nannochloropsis gaditana. Biochim Biophys Acta. 2014 1837(8):1235-46
59. Bernardi A, Perin, G, Sforza E, Galvanin F, ***Morosinotto T***, Bezzo, F. An identifiable state model to describe light intensity influence on microalgae growth. Industrial & Engineering Chemistry Research. *2014* 53 (16): 6738-6749
58. Gris B, ***Morosinotto T***, Giacometti GM, Bertucco A, Sforza E. Cultivation of Scenedesmus obliquus in Photobioreactors: Effects of Light Intensities and Light-Dark Cycles on Growth, Productivity, and Biochemical Composition. Appl Biochem Biotechnol. *2014* 172(5):2377-89
57. Basso S, Simionato D, Gerotto C, Segalla A, Giacometti GM, ***Morosinotto T.**** Characterization of the photosynthetic apparatus of the Eustigmatophycean Nannochloropsis gaditana: Evidence of convergent evolution in the supramolecular organization of photosystem I. Biochim Biophys Acta. 2014 1837(2):306-314. *Author for correspondence
56. Corteggiani Carpinelli E, Telatin A, Vitulo N, Forcato C, D'Angelo M, Schiavon R, Vezzi A, Giacometti GM, ***Morosinotto T***, Valle G. Chromosome scale genome assembly and transcriptome profiling of Nannochloropsis gaditana in nitrogen depletion. Mol Plant. *2014* 7(2):323-35
55. Pinnola A, Dall'osto L, Gerotto C, ***Morosinotto T***, Bassi R, Alboresi A. Zeaxanthin Binds to Light-Harvesting Complex Stress-Related Protein to Enhance Nonphotochemical Quenching in Physcomitrella patens. Plant Cell. *2013* 25(9):3519-34.
54. Carraretto L, Formentin E, Teardo E, Checchetto V, Tomizioli M, ***Morosinotto T***, Giacometti GM, Finazzi G, Szabó I. A Thylakoid-Located Two-Pore Potassium Channel Controls Photosynthetic Light Utilization in Plants. Science. *2013* 342 (6154), 114-118
53. Simionato D, Basso S, Giacometti GM, ***Morosinotto T****. Optimization of light use efficiency for biofuel production in algae. Biophys Chem. *2013* 182, 71-78. *Author for correspondence

52. Gerotto C, ***Morosinotto T*.*** Evolution of photoprotection mechanisms upon land colonization: evidences of PSBS dependent NPQ in late Streptophyte algae. Physiol Plant. *2013* 149 (4), 583-598. *Author for correspondence
51. Pandit A, Reus M, ***Morosinotto T***, Bassi R, Holzwarth AR, de Groot HJ. An NMR comparison of the light-harvesting complex II (LHCII) in active and photoprotective states reveals subtle changes in the chlorophyll a ground-state electronic structures. Biochim Biophys Acta. *2013* 1827(6):738-44
50. Simionato D, Block MA, La Rocca N, Jouhet J, Maréchal E, Finazzi G, ***Morosinotto T****. Response of *Nannochloropsis gaditana* to nitrogen starvation includes a de novo biosynthesis of triacylglycerols, a decrease of chloroplast galactolipids and a reorganization of the photosynthetic apparatus. Eukaryotic Cell *2013* 12(5):665-76 *Author for correspondence
49. Gerotto C, Alboresi A, Giacometti GM, Bassi R and ***Morosinotto T**** Coexistence of plant and algal energy dissipation mechanisms in the moss *Physcomitrella patens*. New Phytologist *2012* 196(3):763-73
48. Carbonera D, Gerotto C, Posocco B, Giacometti GM and ***Morosinotto T.*** NPQ activation reduces chlorophyll triplet state formation in the moss *Physcomitrella patens* BBA – Bioenergetics *2012* 1817(9):1608-15.
47. Sforza E, Simionato D, Giacometti GM, Bertucco A and ***Morosinotto T****. Adjusted light and dark cycles can optimize photosynthetic efficiency in algae growing in photobioreactors. PLoS ONE *2012* 7(6): e38975 *Author for correspondence
46. Fufezan C, Simionato D and ***Morosinotto T****. Identification of key residues for pH dependent activation of violaxanthin de-epoxidase from *Arabidopsis thaliana*. PLoS ONE *2012* 7(4):e35669 *Author for correspondence
45. Sforza E, Bertucco A, ***Morosinotto T***, and Giacometti GM. Photobioreactors for microalgal growth and oil production with Nannochloropsis salina: from lab-scale experiments to large-scale design. Chemical Engineering Research and Design (ChERD). *2012* 90(9): 1151-1158
44. Sforza E, Cipriani R, ***Morosinotto T***, Bertucco A and Giacometti GM. Excess CO2 supply inhibits mixotrophic growth of Chlorella protothecoides and Nannochloropsis salina. Bioresource Technology *2012* 104:523-9.
43. Alboresi A, Gerotto C, Cazzaniga S, Bassi R, ***Morosinotto T***. A red shifted antenna protein associated to photosystem II in Physcomitrella patens. J Biol Chem. *2011* 286(33):28978-87.
42. Bonente G, Formighieri C, Mantelli M, Catalanotti C, Giuliano G, ***Morosinotto T***, Bassi R. Mutagenesis and phenotypic selection as a strategy toward domestication of *Chlamydomonas reinhardtii* strains for improved performance in photobioreactors. Photosynth Res. *2011* 108(2-3):107-20.
41. Simionato D, Sforza E, Corteggiani-Carpinelli E, Bertucco A, Giacometti GM and ***Morosinotto T**** Acclimation of *Nannochloropsis gaditana* to different illumination regimes: effects on lipids accumulation. Bioresource Technology *2011* 102(10):6026-32 * Author for correspondence
40. Gerotto C, Alboresi A, Giacometti GM, Bassi R, ***Morosinotto T*.*** Role of PSBS and LHCSR in Physcomitrella patens acclimation to high light and low temperature. Plant, Cell & Environment *2011* 34(6):922-32. * Author for correspondence
39. Pandit A, ***Morosinotto T***., Reus M, Holzwarth A.R, Bassi R. And De Groot Hjm. First solid-state NMR analysis of uniformly 13C-enriched major light-harvesting complexes from Chlamydomonas reinhardtti and identification of protein and cofactor spin clusters. BBA – Bioenergetics *2011* 1807(4):437-43.

38. Ferroni L, Baldisserotto C, Giovanardi M, Pantaleoni L, ***Morosinotto T.,*** Pancaldi S. Revised assignment of room-temperature chlorophyll fluorescence emission bands in single living cells of Chlamydomonas reinhardtii." Journal of Bioenergetics and Biomembranes *2011*. 43(2):163-73.
37. Bonente G, Ballottari M, Truong TB, ***Morosinotto T***, Ahn TK, Fleming GR, Niyogi KK and Bassi R. Analysis of LhcSR3, a protein essential for feed-back de-excitation in the green alga *Chlamydomonas reinhardtii*. PLoS Biology *2011* Jan 18;9(1):e1000577.
36. De Marchis F, Pompa A, Mannucci R, ***Morosinotto T***, Bellucci M. A plant secretory signal peptide targets plastome-encoded recombinant proteins to the thylakoid membrane. Plant Mol Biol. *2011* Plant Molecular Biology *2011* Volume 76, Issue 3, Page 427-441
35. Ballottari M, Girardon J, Betterle N, ***Morosinotto T***, Bassi R. Identification of the Chromophores Involved in Aggregation-dependent Energy Quenching of the Monomeric Photosystem II Antenna Protein Lhcb5. J Biol Chem. *2010* 285(36):28309-21.
34. Saga G, Giorgetti A, Fufezan C, Giacometti GM, Bassi R, ***Morosinotto T****. Mutation analysis of the violaxanthin de-epoxidase identifies substrate binding sites and residues involved in catalysis. J Biol Chem. *2010* 285(31):23763-70. * Author for correspondence
33. Alboresi A, Gerotto C, Giacometti GM, Bassi R and *Morosinotto T*, Mutants on heat dissipation in the moss *Physcomitrella patens* provide insights on the evolution of protection mechanisms upon land colonization, PNAS *2010* Jun 15;107(24):11128-33
32. ***Morosinotto T****, Segalla A., Giacometti GM, Bassi R., Purification of structurally intact grana from plants thylakoids membranes. J Bioenerg Biomembr *2010* 42(1):37-45 * Author for correspondence
31. Arnoux P§, *Morosinotto T*§*, Saga G, Bassi R, Pignol D. A Structural Basis for the pH-Dependent Xanthophyll Cycle in Arabidopsis thaliana. Plant Cell. *2009* Jul;21(7):2036-44. § Equal contribution * Author for correspondence
30. Alboresi A, Ballottari M, Hienerwadel R, Giacometti GM, ***Morosinotto T*.*** Antenna complexes protect Photosystem I from photoinhibition. BMC Plant Biol. *2009* Jun 9;9:71. * Author for correspondence
29. Betterle N, Ballottari M, Zorzan S, de Bianchi S, Cazzaniga S, Dall'osto L, ***Morosinotto T***, Bassi R. Light induced dissociation of an antenna hetero-oligomer is needed for non-photochemical quenching induction. J Biol Chem. *2009* May 29;284(22):15255-66
28. Ballottari M, Mozzo M, Croce R, ***Morosinotto T***, Bassi R. Pigment binding sites' occupancy and functional architecture of the photosystem II antenna complex LHCB5. J Biol Chem. *2009* Mar 20;284(12):8103-13.
27. Alboresi A, Caffarri S, Nogue F, Bassi R, ***Morosinotto T*.*** In Silico and Biochemical Analysis of Physcomitrella patens Photosynthetic Antenna: Identification of Subunits which Evolved upon Land Adaptation PLoS ONE *2008* Apr 30;3(4):e2033. * Author for correspondence
26. de Bianchi S, Dall'osto L, Tognon G, ***Morosinotto T***, Bassi R. Minor Antenna Proteins CP24 and CP26 Affect the Interactions between Photosystem II Subunits and the Electron Transport Rate in Grana Membranes of Arabidopsis. Plant Cell. *2008* Apr;20(4):1012-28
25. Slavov C, Ballottari M, ***Morosinotto T***, Bassi R, Holzwarth AR. Trap-limited charge separation kinetics in higher plant photosystem I complexes. Biophys J. *2008* May 1;94(9):3601-12.
24. Frigerio S, Campoli C, Zorzan S, Fantoni LI, Crosatti C, Drepper F, Haehnel W, Cattivelli L, ***Morosinotto T***, Bassi R. Photosynthetic antenna size in higher plants is controlled by the plastoquinone redox state at the post-transcriptional rather than transcriptional level. J Biol Chem. *2007* Oct 5;282(40):29457-69.

23. Croce R, Chojnicka A, ***Morosinotto T***, Ihalainen JA, van Mourik F, Dekker JP, Bassi R, van Grondelle R. The low-energy forms of photosystem I light-harvesting complexes: spectroscopic properties and pigment-pigment interaction characteristics. Biophys J. *2007* Oct 1;93(7):2418-28.
22. Matsubara S §, ***Morosinotto T*** §, Osmond CB, Bassi R. Short- and long-term operation of the lutein-epoxide cycle in light-harvesting antenna complexes. Plant Physiol. *2007* Jun;144(2):926-41. § Equal contribution
21. Croce R, Mozzo M, ***Morosinotto T***, Romeo A, Hienerwadel R, Bassi R. Singlet and triplet state transitions of carotenoids in the antenna complexes of higher-plant photosystem I. Biochemistry. *2007* Mar 27;46(12):3846-55.
20. Ballottari M, Dall'Osto L, ***Morosinotto T***, Bassi R. Contrasting behavior of higher plant photosystem I and II antenna systems during acclimation. J Biol Chem. *2007* Mar 23;282(12):8947-58.
19. ***Morosinotto T****, Bassi R, Frigerio S, Finazzi G, Morris E, Barber J. Biochemical and structural analyses of a higher plant photosystem II supercomplex of a photosystem I-less mutant of barley. Consequences of a chronic over-reduction of the plastoquinone pool. FEBS J. *2006* Oct;273(20):4616-30. * Author for correspondence
18. Mozzo M, ***Morosinotto T***, Bassi R, Croce R. Probing the structure of Lhca3 by mutation analysis. Biochim Biophys Acta. *2006* Dec;1757(12):1607-13.
17. Ihalainen JA, Croce R, ***Morosinotto T***, van Stokkum IH, Bassi R, Dekker JP, van Grondelle R. Excitation decay pathways of Lhca proteins: a time-resolved fluorescence study. J Phys Chem B. *2005* Nov 10;109(44):21150-8.
16. ***Morosinotto T***, Ballottari M, Klimmek F, Jansson S, Bassi R. The association of the antenna system to photosystem I in higher plants. Cooperative interactions stabilize the supramolecular complex and enhance red-shifted spectral forms. J Biol Chem. *2005* Sep 2;280(35):31050-8.
15. Carbonera D, Agostini G, ***Morosinotto T***, Bassi R. Quenching of chlorophyll triplet states by carotenoids in reconstituted Lhca4 subunit of peripheral light-harvesting complex of photosystem I. Biochemistry. *2005* Jun 14;44(23):8337-46.
14. Zucchelli G, ***Morosinotto T***, Garlaschi FM, Bassi R, Jennings RC. The low energy emitting states of the Lhca4 subunit of higher plant photosystem I. FEBS Lett. *2005* Apr 11;579(10):2071-6.
13. ***Morosinotto T***, Mozzo M, Bassi R, Croce R. Pigment-pigment interactions in Lhca4 antenna complex of higher plants photosystem I. J Biol Chem. *2005* May 27;280(21):20612-9.
12. Gibasiewicz K, Croce R, ***Morosinotto T***, Ihalainen JA, van Stokkum IH, Dekker JP, Bassi R, van Grondelle R. Excitation energy transfer pathways in Lhca4. Biophys J. *2005* Mar;88(3):1959-69.
11. Ballottari M, Govoni C, Caffarri S, ***Morosinotto T****. Stoichiometry of LHCI antenna polypeptides and characterization of gap and linker pigments in higher plants Photosystem I. Eur J Biochem. *2004* Dec;271(23-24):4659-65. * Author for correspondence
10. Matsubara S, Naumann M, Martin R, Nichol C, Rascher U, ***Morosinotto T***, Bassi R, Osmond B. Slowly reversible de-epoxidation of lutein-epoxide in deep shade leaves of a tropical tree legume may 'lock-in' lutein-based photoprotection during acclimation to strong light. J Exp Bot. *2005* Jan;56(411):461-8.
09. Croce R, ***Morosinotto T***, Ihalainen JA, Chojnicka A, Breton J, Dekker JP, van Grondelle R, Bassi R. Origin of the 701-nm fluorescence emission of the Lhca2 subunit of higher plant photosystem I. J Biol Chem. *2004* Nov 19;279(47):48543-9.
08. ***Morosinotto T***, Breton J, Bassi R, Croce R. The nature of a chlorophyll ligand in Lhca proteins determines the far red fluorescence emission typical of photosystem I. J Biol Chem. *2003* Dec 5;278(49):49223-9.

07. Matsubara S, ***Morosinotto T***, Bassi R, Christian AL, Fischer-Schliebs E, Lüttge U, Orthen B, Franco AC, Scarano FR, Förster B, Pogson BJ, Osmond CB. Occurrence of the lutein-epoxide cycle in mistletoes of the Loranthaceae and Viscaceae. Planta. *2003* Oct;217(6):868-79.
06. ***Morosinotto T***, Caffarri S, Dall'Osto L and Bassi R. "Mechanistic aspects of the xanthophyll dynamics in higher plant thylakoids". *2003* Physiologia Plantarum 119 (3): 347-354.
05. Jennings RC, M Garlaschi F, ***Morosinotto T***, Engelmann E, Zucchelli G.: "The room temperature emission band shape of the lowest energy chlorophyll spectral form of LHCI" FEBS Lett. *2003* Jul 17;547(1-3):107-10.
04. Castelletti S §, ***Morosinotto T*** §, Robert B, Caffarri S, Bassi R, Croce R. Recombinant Lhca2 and Lhca3 subunits of the photosystem I antenna system. Biochemistry. *2003* Apr 15;42(14):4226-34. § Equal contribution
03. Croce R, ***Morosinotto T***, Castelletti S, Breton J, Bassi R. The Lhca antenna complexes of higher plants photosystem I. Biochim Biophys Acta. *2002* Oct 3;1556(1):29-40.
02. ***Morosinotto T***, Baronio R, Bassi R. Dynamics of chromophore binding to Lhc proteins in vivo and in vitro during operation of the xanthophyll cycle. J Biol Chem. *2002* Oct 4;277(40):36913-20.
01. ***Morosinotto T***, Castelletti S, Breton J, Bassi R, Croce R. Mutation analysis of Lhca1 antenna complex. Low energy absorption forms originate from pigment-pigment interactions. J Biol Chem. *2002* Sep 27;277(39):36253-61.

INVITED BOOK CHAPTERS:

03. Perin G and **Morosinotto T*,** Optimization of Microalgae Photosynthetic Metabolism to Close the Gap with Potential Productivity. Ch. 6 of Grand Challenges in Algae Biotechnology Editors: Hallmann, Armin, Rampelotto, Pabulo H. Springer, Berlin, Heidelberg (2019). https://doi.org/10.1007/978-3-030-25233-5_6 *Author for correspondence
02. Perin G and **Morosinotto T***, Potential of Microalgae Biomass for the Sustainable Production of Bio-commodities, In: Progress in Botany. Springer, Berlin, Heidelberg, 10.1007/124_2019_30, (2019). *Author for correspondence
01. **Morosinotto T** and Bassi R. Molecular Mechanisms for Activation of Non-Photochemical Fluorescence Quenching: From Unicellular Algae to Mosses and Higher Plants. Chapter 14 of the book "Non-Photochemical Quenching and Energy Dissipation in Plants, Algae and Cyanobacteria" Series: Advances in Photosynthesis and Respiration, Vol. 40. Demmig-Adams, B., Garab, G., Adams III, W., Govindjee, U.o.I. (Eds.) 2014 pp 315-331

PATENTS

2021: Morosinotto Tomas, Maron Nicola, Simionato Diana, Bucci Francesca. "Genetically modified Microalgal strain and its exploitation"

2021: Uran Mine, Morosinotto Tomas, Bellan Alessandra, "Methods of selecting microalgae & products thereof"

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"

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

2017: Morosinotto Tomas, Eric Marechal, Giorgio Perin, Alessandro Alboresi. "Microalga with better accumulation of triacylglycerol (TAG) by genetic modification of conveyor / translocatori of triose phosphates (TPT)" ITUB20159221A1

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

GRANTS:

2025-2027: PI of a PRIN project entitled: The essential role of mitochondrial respiration in plants metabolism – InMeta

2024-2027: Partner of CariPARO project of excellence, entitled: Model-based Optimisation of MicroAlgae strain selection and industrial production - MOMA

2023-2025: **Local PI of a PRIN-PNRR project entitled: " Improving photosynthetic efficiency by manipulating the redox regulation of carbon fixation – IPERAFIX"**

2023-2028: **Local PI of H2020 project entitled "Best-Crop Boosting photosynthESis To deliver novel CROPs for the circular bioeconomy", from the call HORIZON-CL6-2022-CIRCBIO-02 (RIA).**

2021-2024: **International coordinator of project "CooCE- Harnessing potential of biological CO2 capture for Circular Economy". ACT Accelerating CCS Technologies, (https://cooce.eu/)**

2020-2025: **Local PI of H2020 project entitled "Gain4Crops Rewiring photorespiration using natural and synthetic pathways to sustainably increase crop yield", http://gain4crops.eu/" from the call BIOTEC-02-2019 - Boosting the efficiency of photosynthesis (RIA).**

2021-2024: **supervisor of one Early Stage Researchers (ESR) within the ITN network Digitalgaesation (https://digitalgaesation.eu/) call H2020-MSCA-ITN-2020**

2020: PI of research contract with Golden Chlorella SA, entitled "Isolation of Chlorella strains with altered pigmentation".

2020-2021: PI of FSE project from Regione Veneto (2105-0004-1463-2019), Use of microalgae for the recovery of an industrial waste for a sustainable economy".

2019 – 2020: Participant to LASinAFuel - intrinsic lasing within microalgae to monitor biofuel production funded from ATTRACT Consortium funded by H2020 and coordinated by European Organization for Nuclear Research (CERN)

2017-2021 (renewed in 2019): PI of a research contract with ENI spa, entitled "Selection of algae strains/consortia for production of biofuels". The aim of the work is isolating strains with higher biomass and lipids productivity.

2017-2022 (renewed in 2018, 2019 and 2020): PI of a research contract with TMCI spa entitled "*photobioreactors for microalgae large scale cultivation."* The aim of the research is the development of large scale cultivation of algae for food applications.

2016: PI of FSE project from Regione Veneto, no 2121/2015, entitled: "Use of microalgae for a sustainable aquaculture. AlgaAqua", supporting a collaboration with Alghitaly srl.

2015-2016: Participant to a contract with a company (SABA srl) aiming to explore the possibility of using algae for high added value molecules production.
2014-2016: National coordinator of a PRIN project founded by the Italian Ministry of University and Research entitled "Improving biofuels and high added value molecules production from unicellular algae".
2012-2017: **ERC Starting Grant with a project entitled : "BioLEAP— Biotechnological optimization of light use efficiency in algae photobioreactors"**
2012: Mobility grant from University of Padova to support networking activities of young investigators
2012: FSE project from Regione Veneto, no 2105/1/5/1739/2011, entitled: "Bio-oil production from algae: biotechnological optimization and development of and industrial process"
2010-2013. Participant to a contract with a company (undisclosed name) aiming at the design and installation of a photobioreactor for biomass production from algae. Phase I (2010-2011), aimed to the selection of a suitable species for growth in the conditions identified by the contractor. Phase II (2012-2013) aims to design and install a pilot scale photobioreactor.
2009: - Responsible of a research unit on a project entitled "development of methods for microalgae exploitation for biofuels production" financed by CUIA (Consorzio Universitario Italiano per l'Argentina), coordinated by Prof. Pancaldi, University of Ferrara.
2009:- Grant from University of Padova on a research proposal entitled: *"Physcomitrella patens: a new model organisms for the study of photosynthesis"*
2008 – 2010: National coordinator of a PRIN project founded by the Italian Ministry of University and Research entitled "Protein accumulation and turnover in plants".
2007: Grant from CARIPARO foundation to support a PhD student working on a project entitled: "*Physcomitrella patens*: a new model organism for the study of photosynthesis"
2005: Grant for a Post-doc position at LBC (Cadarache, France) awarded by the French Ministry of Research on a project entitled "Structural studies of carotenoid binding proteins involved in protection from oxidative stress"

ORGANISATION OF SCIENTIFIC MEETINGS
2024: chair of 2nd European Congress on Photosynthesis Research, ePS-2 in Padova, Italy (ww.eps2.org)
2022 - International school for PhD students on photosynthesis "Molecular and biophysical bases of photosynthesis", Venice 9-13th May
2020: Member of Scientific and organization committee of 1st scientific meeting of AISAM (Italian Society for the study of Algae applications)
2017: Chair of the session (Physiology and Genetics of plant-environment interactions) joint SIBV-SIGA (Italian societies of plant biology and plant genetics) meeting, Pisa (Italy)

- Session Chair for International CeBiTec Research Conference 2017 on Algae Biotechnology, Bielefeld (Germany).

2016 - International school for PhD/post doc students on photosynthesis "Molecular and biophysical aspects of photosynthesis", Venice 25-29th January
2013 – International school for PhD/post doc students on biological production of fuels entitled "Renewable energy and biofuels: a biophysical and biochemical approach", Venice 28th January-1st February

INSTITUTIONAL ACTIVITIES.
2021 – date: Director of the Botanical Garden of the University of Padova

2015 – date : member of the Scientific and Personnel strategic committee in the Department of Biology
2018 – date: Coordinator of the Research unit in Plant Biology at the Department of Biology
2020 – 2023 : Responsible of the Facility in plant Genome editing at the Department of Biology
2019 – 2022 : referent for international research at the Department of Biology
2020 – 2021 : coordinator of the committee on third mission at the department of Biology
2015 – 2021 : Deputy director of PhD school in Biosciences, Department of Biology
2006 – 2023 : Supervisor of 21 PhD students: Caterina Gerotto (2008-2010), Diana Simionato (2009-2011), Stefania Basso (2011-2013), Andrea Meneghesso and Giorgio Perin (2013-2015), Pascal Albanese (2014-2016), Alessandra Bellan (2014-17), Mattia Storti (2015-2018), Marco Mellon and Niccolò Fattore (2017-2020), Francesca Bucci (2019-2022), Antoni M Vera-Vives (2020-2023), Eleonora Traverso, Tim Michelberger, Shunling Tan, Francesca Papini (2022-2024), Flavio Collura (2022-2025), Eleonora Mezzadrelli (2023-2026), Francesco Paolo Tranne (2024-2027), Laura Verdesca, Tommaso Storti (2024-2027).

EVALUATION/REVIEWER /EDITORIAL DUTIES

2025: Panel member for Finnish academy of science.

2016, 2017, 2018, 2021- Member of the evaluation committee of ANR (French National Research Agency), Panel on Energy and sustainable development / bioeconomy

2019 – 2022 : Associate Editor for Biotechnology for Biofuels and Frontiers in plant sciences (section Marine and Freshwater Plants).

2014 – 2019: Associate Editor, BMC plant Biology;

2012 – present : Jury Member for French, Italian, Belgian, Dutch PhDs defences

2008 – present Reviewer for ERC, DOE (US Department of Energy), Deutsche Forschungsgemeinschaft (German Research Foundation), Italian Ministry of research, ANR (French National Research Agency), NWO (Netherlands Organisation for Scientific Research), National Science Center Poland, Czech Science Foundation.

2007 – present Reviewer for many international journals of the field including PNAS, Plant Cell, Nature Communication, Plant Journal, Plant Physiology, Trends in Biotechnology, BBA-Bioenergetics, Molecular Plant, Bioresource Technology, Current Opinion in Biotechnology, Biophysical Journal, Frontiers in Plant Genetics and Genomics, Planta, FEBS Letters, Eukaryotic Cell, Plant Cell Physiology, Applied Energy, Philosophical Transactions of the Royal Society B, Plant Molecular Biology, Biotechnology and Bioengineering, Journal of Visualized Experiments, Metabolomics, Journal of Phycology, Biomass & Bioenergy, Plant Physiology and Biochemistry, Journal of Integrative Plant Biology, Molecular Biology Reports, Algal Research, European Journal of Biophysics, European Journal of Phycology, European Journal of Lipid Science and Technology, ACS Sustainable Chemistry & Engineering, Photochemistry and Photobiology, Applied Microbiology and Biotechnology.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

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

EDUCATION :

31st January 2005. Defence of PhD thesis entitled: “Light Harvesting Complexes In Higher Plants: Role, Organisation And Regulation”.

2002 - 2004. PhD thesis shared between the Science Faculty of university of Verona (course in “industrial and environmental biotechnologies”) and the Université de la Méditerranée in Marseille, France (course in “life and health sciences”).

2001: Master degree in Biotechnology at the University of Verona, Faculty of Sciences. Thesis: "Funtional Architecture of Lhca1: mutational analysis of higher plants Photosystem I antenna complex. Supervisor: Prof. Roberto Bassi.

LANGUAGES:

Italian, English and French

Padova, 23/02/2024