

CURRICULUM VITAE



name: Roberto Bassi
**date/place
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Vicenza, Italy

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Languages: Italian, French, and English.

H-index: 74

<http://scholar.google.it/citations?user=-SNflwMAAAAJ&hl=it>

Present position: Full Professor of Plant Physiology and Biochemistry (from 2005): –
Department of Biotechnology, University of Verona.

2002-2005: Professor of Biochemistry and Molecular Biology, University of Aix-Marseille II, France.

2000: habilitation to full professor of Plant Physiology in Italy (24.02.2000).

1993-2002: Associated professor of "Plant Biochemistry", University of Verona.

1991-1992: Associated professor in "Plant Physiology and Biochemistry", University of Urbino.

1989-1990: Visiting scientist at the Department of Molecular Biology, University of Geneva (CH).

1987: visiting scientist at the Institute de Biologie Physico-Chimique. Paris.

1986 to 1991: Tenured assistant professor at the Department of Biology, Padua.

1985: Visiting scientist at the Department of Physiology, Carlsberg Laboratory (Denmark).

1983-1986: Assistant professor. Institute of Botany. Botanical Garden, University of Padua.

1984: Visiting scientist at the Department of Physiology, Carlsberg Laboratory.

1979-1983: graduate student. Institute of Botany and Plant Physiology, University of Padua.

1978-1979: graduate student. Institute of Microbiology, University of Padua. Research on "Ultrastructure of Mycoplasma cells".

1977: Laurea cum laude in Biology at the University of Padua, Faculty of Sciences. Thesis: "The effect of continuous illumination on plastid ultrastructure and carbon metabolism in *Zea mays* leaf". Supervisor: Prof. Mario Orsenigo.

1974-1977: Student in Biology - University of Padua.

Invited Lectures at international Conferences

Before 1993

- Seventh International Congress on Photosynthesis. Providence 1986.
- EMBO workshop on Dynamics of Photosystem II. Jerusalem 1987.
- Eight International Congress on Photosynthesis. Stockholm 1989.
- International Congress on Chloroplast Development. Iraklion (Gr)1991.
- IXth International Congress on Photosynthesis. Nagoya 1992.

1993

- Breeding and Molecular Biology. Eucarpia. Bergamo 1993.
- Harden Conference on: Photoinhibition-Molecular Mechanisms to the field: Essex 1993.
- European Photobiology Congress. Marburg 1993.

1994

- N.A.T.O. Course: Light as energy source and information carrier in Plant Photophysiology. Volterra 1994.

1995

- Tetrapyrrole Photoreceptors. Freising (Ge) 1995.

1996

- 31st Wallenfels Meeting on : Modern Aspects of Photosynthesis Research. Wallenfels, (Ge) 1996
- Jacques Monod Conference on: "Synthesis and Function of Photosynthetic Complexes" Aussoi (Fr) 1996.
- European Science Foundation on: "Molecular Recognition in Photosynthesis" Jaca (SP) 1996.

1997

- Tetrapyrrole Photoreceptors. Blarney, (Ir) 1997.
- European Photobiology Congress. Stresa (I) 1997.
- European Congress of Plant Physiology. Firenze (I) 1997.

1998

- European Bioenergetic Conference. Goteborg (S) 1998.
- EUCHEM Conference on " Phosphorylation in Photosynthesis" Sigtuna (S) 1998.
- European Science Foundation on: "Photosynthetic antenna systems " Tata (Hu) 1998.
- Xth International Congress on Photosynthesis. Budapest, 1998.
- Jacques Monod Conference on:"Regulation of Photosynthesis " Aussoi (Fr) 1998

1999

- Congress of the Society for Experimental Biology. Edinburgh 1999.
- ESF conference on: "Interactions between chlorophylls and carotenoids in Photosynthesis" Antalya, Turkey, 1999.
- ESF conference on: "Non-Photochemical Quenching and the Xanthophyll Cycle - Mechanisms and Implications" Rehovot, Israel (1999).

2000

- International Symposium: Ion Coupled Vectorial Processes. Dusseldorf (Ge) 2000.

2001

- Gordon Research Conference on Carotenoids. Ventura (L.A.) USA 2001.

- Tetrapyrrole Photoreceptors. Providence (USA) 2001.
- Photosynthetic antenna Systems. Surfer Paradise (Brisbane) Australia 2001
- XIth International Congress on Photosynthesis. Brisbane Australia 2001
- European Congress of Photobiology. Lillehammer Norway (2001)

2002

- International Conference on Carotenoids. Honolulu, USA (2002).
- Gordon Conference on "Biochemical aspects of photosynthesis" (2002) Boston, USA.
- Collège de France " Journée Européenne de photosynthèse" (2002) Paris
- Natural and Artificial Photosynthesis (Royal Academy of Sciences, London (2002) U.K.
- Conference of The Scandinavian Society of Photosynthesis, (2002)Umea, Swe.

2003

- EMBO conference on: " Photosynthesis" Les Diablerets, january 26-31(CH)
- Signal Sensing and Plant Primary Metabolism. Potsdam, april 8-12 2003
- English-French Conference on Photosynthesis. Paris, june 2-3, 2003

2004

- Gordon Research Conference on Carotenoids. Ventura (L.A.) USA 2004.
- Western USA Conference in Photosynthesis. Asilomar (San Francisco) USA 2004.
- Satellite Meeting on Photosynthetic antenna complexes. Montreal (Can) 2004
- Annual meeting of the Italian federation of life science societies (Riva del Garda) 2004.
- International Congress of Photosynthesis. Montreal (Can) 2004.
- Chemistry and Biology: the transition between two centuries. Rome, Accademia dei Lincei (2004)
 - Protein Structures meeting of the Italian Chemistry Society. Caserta (2004).

2005

- Congres de la Societé Française de Bioénergétique, Carry-le-Rouet (2005).
- Congres de la Societé Française de photosynthèse, Paris (2005)
- EEC project meeting Photosystem I: Copenhagen, 2005.
- 6th International Conference on Tetrapyrrole Photoreceptors in Photosynthetic Organisms. Luzern, 2005.

2006

- Plant and microbe adaptation to Cold. Salsomaggiore Terme, 2006.
- EEC project meeting Photosystem I and PSII: Tours, 2006.
- Conference of the American Society of Photosynthesis. Woods Hole (2006)(Keynote speaker)
- European conference on Non-photochemical Quenching. Parsberg (2005)
- Congress of the American Society of Photobiology. Puertorico (2006).
- Congresso italiano di Genetica Agraria. Ischia, (2006).
- International Workshop on NPQ. Parsberg, Ge, (2006)
- Congresso SIFV (Società Italiana Scienze della Vita) Riva del Garda (2006)

2007

- International Congress of Photosynthesis. Glasgow (UK).
- Antenna proteins satellite meeting. Drymen (UK)
- Congresso SIFV (Società Italiana Scienze della Vita) Riva del Garda (2007)
- Photosynthesis: from molecular mechanisms to the field. Jerusalem (II) (2007).

2008

- Gordon Conference on Photosynthesis-Mount Holyoke College in South Hadley, Massachusetts (2008).
- Gordon Conference on Biogenesis of Chloroplasts and mitochondria- New England University, Maine, USA.
 - Photosynthesis 2008, Munich.

2009: von Humboldt award lecture: *Light Harvesting Systems of plants and algae: solar energy trasformation into food and biofuels*. Bamberg, 2009

- International conference on "Non-photochemical quenching" Keynote lecture. Parsberg (Ge) 2009
- 4th conference of the Polish Society of Plant Biology (Krakov, PI)
- Photosynthesis 2009 Bichl (Ge).

- 2010:** Gordon Conference on Carotenoids. Ventura (ca) Jan 17-22, 2010
 -ESP Photobiology School (Brixen, IT) June 22-27th 2010.
 -Satellite Meeting on Light Harvesting Systems. Tianjin (China) August 2010
 -Nordic Photosynthesis Society Conference. Tartu (ES) Oct. 10-15th, 2010
- 2011:** International conference on “Non Photochemical Quenching” Passau (Ge) April 2011
 - FEBS conference - Turin, June 2011
 - International Carotenoid Society- Krakow (PL) July 2011.
 - Plant-Light interactions – Neuchatel (CH) August 2011.
 - Algal Biofuel Conference- Bielefeld (DE) September 2011.
 - International conference on Photosystem II- Chengdu (China) November 2011.
- 2012:** ESP Photobiology School (Brixen, IT) June 21-26th 2012.
 - International Conference of Plant Molecular Biology. Jeju, Korea (October 21-27) 2012.
 - SUNBIOPATHS meeting. Weizman Institut, Rehovot, Israel. Jan 12-15th, 2012
- 2013:** -Summer school of Biophysics: “RENEWABLE ENERGY AND BIOFUELS: A BIOPHYSICAL and BIOCHEMICAL APPROACH” Venice, Jan 28th – Feb 1st, 2013.
 -Joint meeting of the KBBE funded projects on Algal biotechnology ., Bruxelles, jan 20-24, 2013.
 -EU-ROS, Budapest, 23-25 May 2013
 -Summer School: “New Frontiers in Photosynthesis” San Michele all’Adige 29th-30th July, 2013
 -XVI th Congress of Photosynthesis. St Louis, August 11-16th, 2013.
- 2014:** Symposium on algal photosynthesis (Amsterdam, Vrije University) march 13th, 2014
 - Congress of the Italian Photobiology Society (Trento, June 11-13, 2014)
 - ESP Photobiology School (Brixen) June 16-21st, 2014
 - International Symposium on the Regulation of Photosynthetic Function. Guilin, China, August 17-21, 2014.
 - XVIth International Congress of Photobiology. Cordoba, Argentina. Symposium on “Regulation of Photosynthesis”. September 7-13 th, 2014.
 - XVIth International Congress of Photobiology. Cordoba, Argentina. Symposium on “Bioengineering photosynthetic cells for Chemicals and Energy”: Tom Moore, Roberto Bassi”. September 7-13 th, 2014.
 - CeBiTec Research Conference Prospects and challenges for the development of algal biotechnology Bielefeld, (Germany) September 21st-24th, 2014.
 - Symposium “FROM PROTEINS FUNCTION TO BIOFUELS”. Padua, Sept 19th, 2014.
- 2015:** The Evolution of Agriculture. National Academy of Sciences, Rome, Italy February 19-20, 2015
 - Gordon Research Conference on Photosynthesis. Bentley, June 2015.
 - Symposium on NON-Photochemical Quenching sept 22-28th Dusseldorf (Ge)
 - Symposium on “Regulation of Photosynthesis” Kyoto, Japan (October 28th-Non 1st, 2015).

Awards

- 1996 - Baccarini-Melandri Award.** From the Italian Society of Plant Physiology.
- 2009 - Helmholtz-Humboldt Research Award.** From the Helmholtz Association and the Alexander von Humboldt Foundation, for internationally renowned scientists.
- 2012 - Chinese Academy of Sciences:** Visiting Research Awards at the Institute of Biophysics-CAS (Beijing) 1/09-31/12/2012.
- 2012 - Elected at the National Academy of Science of Italy** “Accademia dei Lincei”.

Editorial activity

Associated Editor of: *Molecular Plant*, *BMC Plant Biology*, *Journal of Phycology* and *Planta* (**on-going**) and *Journal of Integrative Plant Biology* (2007-2010). Acting as a reviewer for most major journals in the field of Plant biology and general biology.

Courses attended

- Course on Idrobiology. Chioggia (Venice), 1976.
- Cryotechnics in Electron microscopy and their biological applications. Istituto Superiore di Sanità-Rome, 1984.
- E.M.B.O. course on: Modern analysis of Biological Structures. Pavia, 1986.

Organisation of Conferences

- 1993: Chairman of the annual meeting of the Italian Society of Plant Physiology.
- 1998: Co-chairman of the annual meeting of the Italian Society of Photobiology.
- Chairman of the ESF (European Science Foundation) conference on "Tetrapyrrole Photoreceptors". Blarney (Ir) 1997.
- Co-chairman of the "European Congress of Photobiology" Stresa (I) 1997.
- Chairman of the Conference "Photosynthesis 2000" Switzerland 1998
- Chairman of the ESF (European Science Foundation) Conference on "Tetrapyrrole Photoreceptors". Castelveccchio Pascoli (I) 1999.
- Chairman of the symposium " Pigment-protein gene expression", XI International Congress of Photosynthesis, Brisbane 2001.
- Chairman of the conference: "Photosystem I: structural organization and dynamics. Aix-en-Provence 2004.
 - Chairman of the symposium " Chlorophyll-based Light Harvesting systems", XII International Congress of Photosynthesis, Montreal 2004.
 - Chairman of the symposium "Light Harvesting systems: structure, function and regulation", XIII International Congress of Photosynthesis, Glasgow.
 - Chairman of the symposium "Regulation of Light Harvesting Complexes", XIII International Congress of Photosynthesis, Glasgow 2007.
 - Chairman of the session: "Chloroplast and mitochondria" at the Meeting of the French Plant Biology meeting. Versailles. 2007.
 - Organizer of the 1st Meeting of the Italian Society of Plant Biology and of the Symposium on Plant and Animal Evolution. Verona 2009.
- Organizer of the EEC Harvest meeting (Scientific meeting + English Scientific Writing course+ practical course on Membrane protein expression and refolding in vitro. Venice/Verona September 22-30, 2010.
- Organizer of the SUBIOPATH project meeting in Verona, March 25-28th, 2011.
- Co-Organizer of the: RENEWABLE ENERGY AND BIOFUELS: A BIOPHYSICAL AND BIOCHEMICAL APPROACH. Venice. Jan 28-Feb 2nd, 2013.
- Organizer of the: ACCLIPHOT ITN research network meeting and training course Verona, June 8-15th, 2014.

Teaching experience

- 1977-1983 - High school teacher in Mathematics and Natural Sciences.
- 1978: Demonstrator of Microbiology.
- 1979 to 1987: Botany. Lectures and practicals. Department of Biology, University of Padua.
- 1987: Lecturer of Comparative Biochemistry.
- Participation to examination committee of Botany, Plant Physiology and (1984-1989), of Comparative Biochemistry and Applied Biochemistry.
- 1992 to present: Professor of Plant Physiology and Plant Biochemistry.
- 1996-99: Visiting professor in "Photosynthesis and Photobiology" University of Lausanne (CH).
- 2000: Visiting Professor. Ecole Normale Supérieure-Paris (Fr).
- 2001: visiting Professor. Université Paris VI- Paris (Fr).

-2002-2004: Professor of Biochemistry and Molecular Biology, Université Aix-Marseille II (France). Lectures in Plant Cell Biology (4th year), Plant Molecular Biology (graduate) and General Biochemistry (undergraduate).

2005-: teaching the following subjects to graduate and undergraduates: Plant Secondary Metabolism, Plant Biochemistry, Molecular Ecophysiology.

2006-2009 General Biology (undergraduate).

2010- Plant Biochemistry and Physiology (undergraduate); Bioenergy and Biofuels (graduate); Plant Stress molecular biology (graduate).

2011-14: Plant Biochemistry and Physiology (undergraduate); Bioenergy and Biofuels (graduate); Plant Stress molecular biology (graduate).

Tutoring

- 1983-1991: tutoring of undergraduate students in Biology for their 1 year long thesis work (11 students).
- 1987-1991: tutoring of PhD students in Biology (2 students).
- 1993-to present: tutoring of undergraduate students in Plant Biotechnology for their 1.5 years long thesis work (19 students).
- 1998-to present: tutoring of PhD students in “Biotechnology” (18 students) and “Microbiologie e Biotecnologie des Plantes” (2 students).

Research: Organisation:

1999 and 2002: supervisor of an applied Plant Biotechnology laboratory co-founded by the regional administration and by industrial partners for the development of transgenic crops with improved resistance to virus infection and cold stress and for the expression of recombinant proteins with pharmaceutical interest in plants.

2000 to 2002: Chairman of the PhD program in “ Plant Biotechnology”, University of Verona.

-from 2009, ongoing: Chairman of the PhD program in “Molecular Biotechnology, University of Verona.

Funding:

The following programs presently support the research:

- FIRB (Special found for basic research) Photosynthesis (2002-2005).
- FIRB Plant Stress (2002-2005).
- FISR (Special found for applied research) Plant Functional Genomic (Genefun) (2003-2005)
- CARIVERONA Foundation: Non-transmissible plastid transformation for vaccine expression in plants. (2002-2005).
- CEE FP6 “PSI-CO” 2002-2006
- FISR Hydrogen production in micro algae- Idrobio. (2005-2008).
- Trento Science Foundation: Photosystem II structure and function (2005-2008).
- PRIN - (National Research Found) Drought and heat stress in WT and transgenic maize (2006-2008)
- FIRB-Parallelomics (2007-2011)
- FISR- IDROBIO (2005-2009)
- FIRB-genomics of solanaceae (2005-20011).
- CEE FP7 “ Harvest”2009-2013
- CEE FP7 “Sunbiopaths” 2009-2013
- Cariverona “water resources”2010-2013
- MIPAF (Ministry of agriculture-Italy): “Biomassval” (2011-2014)
- MIPAF:”Biohydrogen” 2011-2013
- PRIN 2008 “Regulation of Photosynthesis” (2009-2011)
- EEC FP7 “ACCLIPHOT” 2012-2015.

Participation to National and International Panels:

- Member of the Board of the ISPR (International Society of Photosynthesis Research) (2007-2010).
- Member of the Board of the Italian Society of Plant Physiology (2001-2003 and 2007-2009)
- Member of the Scientific Board of the Italian Biofuels Platform (2007-)
- Vice-President of the International Society of Photobiology (2009-)
- Member of the Italian Governmental Agency “National Committee for Biosafety, Biotechnology and Life Sciences” (2012-)
- Member of the Panel for “Less is More” call from Netherlands Organization for Scientific Research (2013).
- Member of the Panel for “ERA-CAPS” 2014.
- Member of the Scientific Evaluation committee of the CRA (AGRONOMIC RESEARCH CENTRE of Italy) (2014-).
- Member of the Scientific Evaluation Committee of the CNR,(2015) (National Research Council).

Membership of Scientific Societies and Academies:

- Correspondent Member of the Italian National Academy of Sciences, known as the “*Accademia dei Lincei*”, Rome (since 2012).

Research, Current

The general area of research includes the study of **(A)** the fundamental principles of light energy harvesting, management and use in photosynthetic reaction centres; **(B)** the molecular mechanisms of plant resistance to environmental stress (cold, drought and excess light). **(C)** Carotenoid biosynthesis and physiology. **(D)** Engineering of unicellular algae for increasing efficiency in production of biomass and biofuels. **(E)** Use of hyperthermophilic enzymes for lignocellulosic biomass hydrolysis.

Three biological systems are used consistently in the lab:

- Chlamydomonas reinhardtii* (green algae): for work in biofuels, nucleus to plastid signalling.
- Physcomitrella patens* (mosses) for synthetic biology approaches, mutation analysis in vivo. Ideal for reverse genetic approach due to its competence for homologous recombination.
- Arabidopsis thaliana* (higher plants). Also useful for reverse genetics and acclimation analysis.

1) Structure-function relations in Light Harvesting (Lhc) and related proteins.

- 1a) *Energy transfer pathways in light harvesting proteins.*
- 1b) *Non-photochemical Fluorescence Quenching and photoprotection.*
- 1c) *Structural organization of photosynthetic supramolecular complexes in plants, mosses and green algae.*
- 1d) *Evolution of molecular mechanisms of photosynthesis and stress resistance during transition from water to land environment.*

2) Function of Carotenoids in photoprotection and stress signal transduction.

Reverse genetics for construction of plants/algae/mosses lacking individual carotenoid species of retaining a single xanthophyll species. Study of the phenotype in order to define specific function for molecular species in photosynthetic function and biogenesis. Focus on control of chloroplast gene translation by xanthophyll species.

3) Structure/function analysis of carotenoid biosynthesis enzymes.

Identification of genes involved in carotenes/xanthophyll biosynthesis, cloning, expression, crystallization, mutation analysis.

4) Regulative acclimation of the chloroplast to temperature/light conditions.

Comparative analysis of mechanisms by which algae/mosses/plants undergo acclimation to different light/temperature conditions. Role of antenna size regulation vs energy dissipation vs ROS scavenging.

6) Selection of algal strains for biofuel production and domestication of algae.

Identification of genes controlling bottlenecks for biomass accumulation in algae. Focus on engineering for light penetration in dense cultures typical of photobioreactors and on modulation of expression of LHCSR genes responsible for energy dissipation into heat.

Publication List

Papers published in international peer-reviewed journals

2015

221) Pinnola, A., Ghin, L., Gecchele, E., Merlin, M., Avesani, L., Pezzotti, M., Alboresi, A., Capaldi, S., Cazzaniga S., and **Bassi, R.** Heterologous expression of moss LHCSR1: a the Chlorophyll a-xanthophyll pigment-protein complex catalyzing Non-Photochemical Quenching, in *Nicotiana* sp. **Journal of Biological Chemistry**, in press

220) Borisova-Mubarakshina M. M., Ivanov, B. N. Vetoshkina, D. V. Lubimov, V. Y., Fedorchuk, T. P., Naydov Kozuleva, I. A., M. A., Rudenko, N. N., Dall'Osto, L., Cazzaniga S. and **Bassi, R.** Long-term acclimatory response to excess excitation energy: evidence for a role of hydrogen peroxide in photosystem II antenna size regulation. **Journal of Experimental Botany**, in the press.

219) Lei Zhao, Dongmei Cheng, Xiahe Huang, Mei Chen, Luca Dall'Osto, Jiale Xing, Liyan Gao, Roberto Bassi, Lianwei Peng, Yingchun Wang, Jean-David Rochaix, Fang Huang. LHC-like protein of *Chlamydomonas reinhardtii* is involved in photosystem I assembly/stability. Under revision.

218) Silvia Berteotti, Matteo Ballottari and Roberto Bassi. Exploiting trade-off between Photochemical and Non-Photochemical-Quenching in *Chlamydomonas reinhardtii* for increasing productivity. Submitted

217) Luca Dall'Osto, Stefano Cazzaniga, Mauro Bressan and Roberto Bassi. The LHCI antenna complex is crucial for acclimation of *Arabidopsis* to rapidly changing light conditions. Submitted.

216) Alberta Pinnola, Stefano Cazzaniga, Alessandro Alboresi, Reinat Nevo, Smadar Zaidman, Ziv Reich and Roberto Bassi. LHCSR proteins catalyze Excess Energy Dissipation in both Photosystems of *Physcomitrella patens*. **The Plant Cell**. In press.

215) Lutz Wobbe, Roberto Bassi & Olaf Kruse. The multi-level control of photosynthetic light capture in Viridiplantae. Trends in Plant Science. Under revision.

214) Matteo Ballottari, Thuy Truong, Eleonora De Re, Giulio R. Stella, Graham R. Fleming, Roberto Bassi and Krishna K. Niyogi. Identification of pH sensing sites in the LHCSR3 protein essential for triggering Non Photochemical Quenching in *Chlamydomonas reinhardtii*. Submitted.

213) Goldschmidt-Clermont, M. and **Bassi, R.** (2015) Sharing light between two photosystems: mechanism of state transitions. **Current Opinion in Plant Biology** 20;25:71-78.

212) Dall'Osto, L., Bressan, M. and **Bassi, R.** (2015) Biogenesis of LHC proteins (2014) **Biochim. Biophys. Acta**. In the press [doi:10.1016/j.bbabi.2015.02.009](https://doi.org/10.1016/j.bbabi.2015.02.009)

211) Nico Betterle, Matteo Ballottari, Sacha Baginsky and **Roberto Bassi** (2015) High light-dependent phosphorylation of Photosystem II inner antenna CP29 in monocots is STN7-independent and enhances Non Photochemical Quenching. **Plant Physiology** 167: 457-471.

2014

210) Mannucci S, Ghin L, Conti G, Tambalo S, Lascialfari A, Orlando T, Benati D, Bernardi P, Betterle N, **Bassi R**, Marzola P, Sbarbati A (2014) Magnetic nanoparticles from *Magnetospirillum gryphiswaldense* increase the efficacy of chemotherapy in a model of colon carcinoma. **PLoS One**. 2014 Oct 7; 9(10).

209) Tim de Mooij, Marcel Janssen, Oscar Cerezo-Chinarro, Jan H. Mussgnug, Olaf Kruse, Matteo Ballottari, **Roberto Bassi**, Sandrine Bujaldon, Francis-André Wollman and René Wijffels (2014) Antenna size reduction as a strategy to increase biomass productivity: a great potential not yet realized. **Journal of Applied Phycology**. In press.

208) Stefano Cazzaniga, Luca Dall'Osto*, Luca Scibilia, Joanna Szaub, Matteo Ballottari, Saul Purton and **Roberto Bassi** (2014) Domestication of the green alga *Chlorella sorokiniana*: reduction of antenna size improves light-use efficiency in a photobioreactor. **Biotechnology for Biofuels** 7(1):157-167.

207) Theresa Quaas, Silvia Berteotti, Matteo Ballottari, Kerstin Flieger, **Roberto Bassi**; Christian Wilhelm; Reimund Goss (2014) Non-photochemical quenching and xanthophyll cycle activities in six green algal species suggest mechanistic differences in the process of excess energy dissipation. **Journal of Plant Physiology**, 172:92-103.

206) Hanna Berger, Olga Blifernez-Klassen, Matteo Ballottari, **Roberto Bassi**, Lutz Wobbe and Olaf Kruse (2014) Orchestration of carbon assimilation and photosynthetic light capture in the photoheterotrophic green alga *Chlamydomonas reinhardtii*. **Molecular Plant**, 7(10):1545-59.PMID: 25038233

205) Sabrina Grewe, Matteo Ballottari, Marcelo Alcocer, Cosimo D'Andrea, Ben Hankamer, Jan H. Mussgnug, **Roberto Bassi**, Olaf Kruse (2014), Light-harvesting complex protein LHCBM9 is critical for photosystem II activity and hydrogen production in *Chlamydomonas reinhardtii*. **The Plant Cell**, 26(4):1598-1611.

204) M. Ballottari, M. Alcocer, C. D'Andrea, D. Viola, T. K. Ahn, A. Petrozza, D. Polli, G. Fleming, G. Cerullo and R. Bassi (2014) Regulation of Photosystem I light harvesting by zeaxanthin. *Proc. Natl. Acad. Sci USA* 111(23):E2431-8: 201404377

203) Dall'Osto L, Cazzaniga S, Wada M, **Bassi R.** (2014) On the origin of a slowly reversible fluorescence decay component in the *Arabidopsis npq4* mutant. **Philos Trans R Soc Lond B Biol Sci**. 2014 Mar 3; 369 (1640): 20130221.

2013

202) Pinnola A, Dall'Osto L, Gerotto C, Morosinotto T, **Bassi R**, Alboresi A. (2013) Zeaxanthin Binds to Light-Harvesting Complex Stress-Related Protein to Enhance Non-photochemical Quenching in *Physcomitrella patens*. **Plant Cell**. 25(9): 3519-33

201) Floris, M.; **Bassi, R.**; Robaglia, C; Alboresi, A.; Lanet, E. (2013) Kinetics of light stress response suggest involvement of post-transcriptional control of light-harvesting genes in retrograde signaling. **Plant Molecular Biology**, 82(1-2):147-54.

200) Stefano Cazzaniga, Luca Dall'Osto, Sam-Geun Kong, Masamitsu Wada and **Roberto Bassi** (2013) Differential triggering by red vs. white light of chloroplast avoidance and excess energy dissipation in *Arabidopsis thaliana* allows for evaluation of their relative effect in photoprotection. **Plant Journal** 76(4):568-79

199) Matteo Ballottari, Milena Mozzo, Julien Girardon, Rainer Heinerwadel and **Roberto Bassi** (2013) Chlorophyll triplet quenching and photoprotection in the higher plant monomeric antenna protein Lhcb5. **J Phys Chem B**. 2013 Sep 26;117(38):11337-48

198) Dall'Osto, L., Piques, M., Ronzani, M., Alboresi, A., Cazzaniga S. and **Bassi R.** (2013) The Arabidopsis nox mutant lacking carotene hydroxylase activity reveals a critical role of xanthophylls for Photosystem I biogenesis. **The Plant Cell**, 25(2):591-608

197) Formighieri, C., Kuras, R., Cazzaniga, S. and **Bassi, R.** (2013) Biogenesis of photosynthetic complexes in the chloroplast of *Chlamydomonas reinhardtii* requires arsA5p, a homolog of prokaryotic arsenite transporter and eukaryotic TRC40 for guided entry of Tail-anchored proteins. **The Plant Journal**. 73(5):850-61.

196) Pandit, A., Reus, M., Morosinotto, T., **Bassi, R.**, Holzwarth A. R., and de Groot H.J.M. (2013) 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**. 1827(6):738-44.

2012

195) Bonente G, Pippa S, Castellano S, Bassi R, Ballottari M. (2012) Acclimation of *Chlamydomonas reinhardtii* to different growth irradiances. **J. Biol. Chem.** 287(8):5833-47

194) Dall'Osto, L., Holt N.E., Kaligotla, S., Carbonera, D., Fuciman, M., Frank, H., Alrich, J and **Bassi, R.** (2012) Zeaxanthin protects plant photosynthesis by modulating chlorophyll triplet yield in specific light-harvesting subunits. **J. Biol. Chem.** 287(50):41820-34

193) Ferrante, P., Ballottari, M. Bonente, G., Giuliano, G., **Bassi R.** (2012) The LHCBM1 and LHCBM2/7 polypeptides, components of the major LHCII complex, have distinct functional roles in the photosynthetic antenna system of *Chlamydomonas reinhardtii* . **J. Biol. Chem.** 287:16276-88.

192) Fuciman, M., Enriquez, M. M. Polivka, T., Dall'Osto, L. **Bassi, R.** and Frank H. A. (2012) The Role of Xanthophylls in Light-harvesting in Green Plants: A Spectroscopic Investigation of Mutant LHCII and Lhcb Pigment-proteins Complexes. **Journal of Physical Chemistry B**. 116: 3834-49

191) Cazzaniga, S., Li, Z. Niyogi, K. K. **Bassi R.** and Dall'Osto L. (2012) The Arabidopsis szl1 mutant reveals a critical role of β -carotene in Photosystem I photoprotection. **Plant Physiology**. 159(4):1745-58.

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