

CURRICULUM VITAE



name: Roberto Bassi
**date/place
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Languages: Italian, French, and English.

H-index: 73

<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, Pl)
- 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.
- Co-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 V I- 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).
- 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 “Sunbiopath” 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

220) Maria M. Borisova-Mubarakshina, Boris N. Ivanov, Daria V. Vetoshkina, Valeriy Y. Lubimov, Tatyana P. Fedorchuk, Ilya A. Naydov, Marina A. Kozuleva, Natalia N. Rudenko, Luca Dall'Osto, Stefano Cazzaniga and Roberto Bassi. Long-term acclimatory response to excess excitation energy: evidence for a role of hydrogen peroxide in photosystem II antenna size regulation. Submitted.

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. Submitted.

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*. Submitted.

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

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**. In the press.

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 thermotherapy 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. Polívka, 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.

190) Caliandro, R., Nagel, K. A., Kastenholz, B., Bassi, R., Li, Z. Niyogi, K.K. Pogson, B.J., Schurr U. & Matsubara S. (2012) Effects of altered α - and β -branch carotenoid biosynthesis on acclimation of Arabidopsis to photo-oxidative stress induced by short sunflecks. **Plant Cell Environ**. PMID:22860767

189) Gerotto, C., Alboresi, A., Giacometti, G. M., **Bassi R.** and Morosinotto T. (2012) Independent activity of plant and algal energy dissipation mechanisms in the moss *Physcomitrella patens*. **New Phytologist** 196(3):763-73.

188) Azzabi, G. Pinnola, A., **Bassi R.** and Alboresi A. (2012) Enhancement of Non Photochemical Quenching in the Bryophyte *Physcomitrella patens* during Acclimation to Salt and Osmotic stress. **Plant Cell Environment**, 53(10):1815-25

187) Formighieri, C., Franck F. and **Bassi R.** (2012) Regulation of the pigment optical density of an algal culture: filling the gap between photosynthetic productivity in the laboratory and in mass culture. **Journal of Biotechnology**. 162, 115-123.

186) Schlau-Cohen, G. S. Ishizaki, A. Calhoun, T. R. Ginsberg, N. S., Ballottari, M., **Bassi R.** & Fleming G. R. Elucidation of the timescales and origins of quantum electronic coherence in LHCII (2012). **Nature Chemistry** 4(5):389-95.

185) Fiore, A., Luca Dall'Osto, Stefano Cazzaniga, Gianfranco Diretto, Giovanni Giuliano, **Roberto Bassi** (2011) A quadruple mutant of Arabidopsis reveals a novel activity for LUT1/CYP97C1 in β -carotene hydroxylation and a regulatory role of xanthophylls on determination of the PSI/PSII ratio. **BMC Plant Biology** 12-50.

184) Formighieri, C., Ceol, M., Bonente, G. Rochaix J.-D. and **Bassi R.** (2011) Retrograde signaling and photoprotection in a gun-4 mutant of *Chlamydomonas reinhardtii*. **Molecular Plant**, 5: 1242-1262.

2011

- 183) Alboresi, A., Dall'Osto, L. Aprile, A., Carillo, P. Roncaglia, E. Cattivelli, L. and **Roberto Bassi** (2011) Reactive Oxygen Species Signaling in wild type *Arabidopsis thaliana* and the photosensitive mutant lacking zeaxanthin and lutein. **BMC-Plant Biology** 11(1):62.
- 182) de Bianchi, S. Betterle, N., Kouril, R., Cazzaniga, S., Boekema, E., **Bassi, R.** and Dall'Osto L. (2011) *Arabidopsis* mutants deleted in the light-harvesting protein Lhcb4 have a disrupted photosystem II macrostructure and are defective in photoprotection. **The Plant Cell**, 23(7):2659-79.
- 181) Miloslavina, Y., de Bianchi, S., Dall'Osto, L., **Bassi, R.** and Holzwarth, A. (2011) Quenching in *Arabidopsis thaliana* mutants lacking monomeric antenna proteins of Photosystem II. **Journal of Biological Chemistry**, 286, 36830-40
- 180) Ballottari, M., Girardon J.; Dall'Osto L.; Bassi R. (2011) Evolution and functional properties of photosystem II light harvesting complexes in eukaryotes. **Biochim. Biophys. Acta – Bioenergetics** 1817(1):143-57.
- 179) Alessandro Alboresi, Caterina Gerotto, Stefano Cazzaniga, **Roberto Bassi** and Tomas Morosinotto (2011) A red shifted antenna proteins associated to photosystem II in *Physcomitrella patens*. **J. Biol. Chem.** 286(33):28978-87.
- 178) Gerotto C, Alboresi A, Giacometti GM, Bassi R, Morosinotto T. (2011) Role of PSBS and LHCSR in *Physcomitrella patens* acclimation to high light and low temperature. **Plant Cell Environ.** 34(6):922-32
- 177) Pandit A, Morosinotto T, Reus M, Holzwarth AR, Bassi R, de Groot HJ (2011) First solid-state NMR analysis of uniformly ¹³C-enriched major light-harvesting complexes from *Chlamydomonas reinhardtii* and identification of protein and cofactor spin clusters. **Biochim Biophys Acta.** 2011 Apr;1807(4):437-43
- 176) Bonente, G, C., Formighieri, Giuliano, G., Morosinotto, T and Bassi, R. (2011) "Mutagenesis And Phenotypic Selection As A Strategy Towards Domestication Of *Chlamydomonas reinhardtii* Strains For Improved Performance In Photobioreactors. **Photosynthesis Research**, 108(2-3):107-20.
- 175) Ginsberg, Naomi, Matteo Ballottari, Roberto Bassi and Graham Fleming (2011) Solving structure in the CP29 light harvesting complex with polarization-phased 2D electronic spectroscopy" Tracking. **Proc. Natl. Acad. Sci. USA.** 108(10):3848-53
- 174) Bonente, Giulia, Matteo Ballottari, Thuy Truong, Tomas Morosinotto, Tae-Kyu Ahn, Graham Fleming, Krishna Niyogi and Roberto Bassi (2011) Analysis of LhcSR3, a protein essential for feed-back de-excitation in the green alga *Chlamydomonas reinhardtii*. **PLOS Biology** 9(1): e1000577

2010

- 173) de Bianchi S, Ballottari M, Dall'osto L, Bassi R. (2010) Regulation of plant light harvesting by thermal dissipation of excess energy. **Biochem Soc Trans.** 2010 Apr;38(2):651-60.
- 172) Betterle, N., Ballottari, M., Hienerwadel, R., Dall'Osto L. and Bassi R. (2010) Dynamics Of Zeaxanthin Binding To The Photosystem II Monomeric Antenna Protein Lhcb6 (CP24) And Modulation Of Its Photoprotection Properties. **Archives of Biochemistry and Biophysics.** 504(1):67-77.
- 171) Ballottari, M., Girardon J., Betterle, N., Morosinotto T. and Bassi R. (2010) Identification Of the Chromophores Involved In Aggregation-Dependent Energy Quenching Of The Monomeric Photosystem II Antenna Protein Lhcb5. **Journal of Biological Chemistry**, 3;285(36):28309-21
- 170) Saga, G., Giorgetti, A., Fufezan, C., Giacometti, G. M. Bassi R. and Morosinotto T. (2010) "Mutation analysis of the violaxanthin de-epoxidase identifies substrate binding sites and residues involved in catalysis" **Journal of Biological Chemistry**, 285(31):23763-70.
- 169) S. Schlau-Cohen, G., Calhoun, T. R. Ginsberg, N. S., Ballottari, M. , Bassi, R. and Fleming G. R. (2010) Spectroscopic elucidation of uncoupled transition energies in the major photosynthetic light-harvesting complex, LHCII. **Proc. Natl. Acad. Sci. USA.** 107(30):13276-81
- 168) Alboresi, A., Gerotto, C., Giacometti, G. M. Bassi, R. and Morosinotto T. (2010) Heat dissipation in the moss *Physcomitrella patens* provides Insights on the evolution of protection mechanisms upon land colonization. **Proc. Natl. Acad. Sci. USA** 107 (24) 11128-11133

167) Dall'Osto L., Cazzaniga S. Havaux M. and Bassi R. (2010) Enhanced photoprotection by protein-bound xanthophyll vs free pools: a comparative analysis of Chl b and xanthophyll biosynthetic mutants. **Molecular Plant**. 3: 576 - 593.

2009

166) van Oort, B., de Bianchi, S., Dall'Osto L., Bassi R., Trinkunas, G., Croce, R. and van Amerongen, H. (2009) Effect of antenna-depletion in Photosystem II on excitation energy transfer in thylakoid membranes of *Arabidopsis thaliana*. **Biophysical Journal**. 98(5):922-31.

165) Calhoun T.R., Ginsberg N.S., Schlau-Cohen G.S., Cheng YC, Ballottari M., Bassi R., Fleming G.R. Quantum Coherence Enabled Determination of the Energy Landscape in LHCII. **The Journal of Physical Chemistry** 113(51):16291-5

164) Morosinotto T., Segalla A., Giacometti G. M., and Bassi R. (2009) An optimised protocol for purification of structurally intact grana membranes. **Journal of Bioenergetics and Biomembranes** 42(1):37-45.

163) Mozzo M., Mantelli M., Passarini F., Caffarri S., Croce R. and Bassi R. (2009) Functional analysis of gene products encoding photosystem I light-harvesting complexes (Lhca) in *Chlamydomonas reinhardtii*. **Biochim. Biophys. Acta** 1797(2):212-221

162) Schlau-Cohen, G.; Calhoun, T.; Ginsberg, N.; Read, E.; Ballottari, M.; Bassi, R.; Van Grondelle, R.; Fleming, G. (2009) "The Pathways of Energy Flow in LHCII from Two-Dimensional Electronic Spectroscopy" **Journal of Physical Chemistry B** 113(46):15352-63.

161) Campoli, C. Caffarri, S., Svensson, J. T., Bassi, R., Stanca, M. A. Cattivelli L. and Crosatti C. (2009) Parallel pigment and transcriptomic analysis of four barley *Albina* and *Xantha* mutants reveals the complex network of the chloroplast-dependent metabolism. **Plant Mol Biol** 71(1-2):173-91.

160) Arnoux P, Morosinotto T, Saga G, Bassi R, Pignol D.(2009) A structural basis for the pH-dependent xanthophyll cycle in *Arabidopsis thaliana*. **The Plant Cell**. 2009 21(7):2036-44.

159) Li Z., Ahn, T. K., Avenson T. J., Ballottari M., Cruze, J. A., Kramer, D. M., Bassi, R. Fleming, G. R. Keasling J. D. and Niyogi K.K. (2009) Lutein accumulation in the absence of zeaxanthin restores non-photochemical quenching in the *Arabidopsis thaliana* npq1 mutant. **The Plant Cell**, 21(6):1798-812

158) Betterle N, Ballottari M, Zorzan S, de Bianchi S, Cazzaniga S, Dall'osto L, Morosinotto T, Bassi R.(2009) Light induced dissociation of an antenna hetero-oligomer is needed for non-photochemical quenching induction. **J. Biol. Chem.** 284, 15255–15266.

157) Ballottari, M Mozzo, M., Croce, R. Morosinotto T. and Bassi R. (2009) pigment binding sites occupancy and functional architecture of the Photosystem II antenna complex Lhcb5. **J. Biol Chem.** 284, 8103-8113.

156) Frenkel, M. Külheim, C. Johansson H. Jänkänpää, Skogström, O., Dall'Osto, L Ågren, J. Bassi, R. Moritz, T. Moen J. and Jansson S. (2009) Improper regulation of light harvesting in *Arabidopsis* results in a metabolic reprogramming. **BMC Plant Biology**. 9(1):12.

155), Avenson, T.J., Ahn, T.K., Niyogi, K.K., Ballottari, M., Bassi, R., and Fleming, G.R. (2009) Zeaxanthin acts as an allosteric effector of charge-transfer quenching involving a lutein radical cation in CP26. **J. Biol Chem**. 284(5):2830-5

154) Lemeille S, Willig A, Depège-Fargeix N, Delessert C, Bassi R, Rochaix JD.(2009) Analysis of the Chloroplast Protein Kinase Stt7 during State Transitions. **PLoS Biology**.;7(3):e45

2008

Ahn, T.K., Avenson, T.J., Ballottari, M., Cheng, Y-C, Niyogi, K.K., Bassi, R., and Fleming, G.R.(2008) Architecture Of A Charge-Transfer State Regulating Photosynthetic Light Harvesting In Plants. **Science** 320, 794-797.

- 152) Mozzo, M., Passarini, F., Bassi, R. van Amerongen H. and Croce R. (2008) All Photosystem II antenna complexes possess the finger prints of the non-photochemical quenching site. **Biochim. Biophys. Acta** 1777(10):1263-7.
- 151) Mozzo, M. Dall'Osto, L., Hienerwadel, R. Bassi R. and Croce R. (2008) Photoprotection In The Antenna Complexes Of Photosystem II: Role Of Individual Xanthophylls In Chlorophyll Triplet Quenching. **J. Biol. Chem.** 2008 Mar 7;283(10):6184-92
- 150) Cheng, Y-C, Ahn, T.K. Avenson, T.J. Zigmantas, D, Niyogi, K.K. Ballottari, M. Bassi R. and Fleming G. R. (2007) Kinetic modelling of charge-transfer quenching in the CP29 minor complex of Photosystem II. **Journal of Physical Chemistry.** 112(42):13418-23.
- 149) Bonente, S., Passarini, F., Caffarri, S. and Bassi, R. (2008) The occurrence of the PsbS gene product in *Chlamydomonas reinhardtii* and other photosynthetic organisms and its correlation with energy quenching. **Photochem. Photobiol.** 84: 1359–1370
- 148) de Bianchi S., Dall'Osto L., Tognon G., Morosinotto T. and Bassi R. (2008) The minor Antenna Proteins CP24 and CP26 control the interactions between Photosystem II subunits and the electron transport rate within grana membranes. **The Plant Cell.** 20 1012-1028
- 147) Bonente, G., Howes, B. D., Caffarri, S. Smulevich G. and R. Bassi (2008) Interactions between the photosystem II subunit PsbS and Xanthophylls as studied in vivo and in vitro. **J. Biol. Chem.** 2008;283 8434-8445
- 146) Alboresi, A., Caffarri, S., Nogue, F., Bassi R. and Morosinotto T. (2008) In between algae and higher plants: analysis of the moss *Physcomitrella patens* genome allows identification of proteins associated with adaptation of photosynthesis to terrestrial environment. **Plos One** 3(4): e2033.
- 145) Avenson, T.J., Ahn, T.K., Zigmantas, D., Niyogi, K.K., Li, Z. Ballottari, M., Bassi, R., and Fleming, G.R. (2008) Zeaxanthin radical cation formation in minor light harvesting complexes of higher plant antenna. **J. Biol. Chem.** 2008;283 3550-3558.

2007

- 144) Caffarri, S. Passarini, F. Bassi R. and Croce R. (2007) A specific binding site for neoxanthin in the monomeric antenna proteins CP26 and CP29 of Photosystem II. **FEBS Letters**, 581(24):4704-10
- 143) Slavov, C. Ballottari M, Morosinotto, T. Bassi R., and Holzwarth A R (2007) Trap-limited charge separation kinetics in Photosystem I complexes from higher plants. **Biophys. J.** 94(9):3601-12.
- 142) Frigerio, S., Campoli, C., Zorzan, S., Fantoni, L. I., Crosatti, C., Drepper, F., Haehnel, W., Cattivelli, L., Morosinotto T. and Bassi, R. (2007) Photosynthetic antenna size in higher plants is controlled by plastoquinone redox state at post-transcriptional rather than transcriptional level. **J. Biol. Chem.** 282. 29457–29469
- 141) Croce, R., Chojnicka A., Morosinotto T, Ihalainen J. A., van, Mourik, F., Dekker, J. P., Bassi R. and van Grondelle R. (2007) The low-energy forms of Photosystem I-light harvesting complexes: spectroscopic properties and pigment-pigment interaction characteristics. **Biophysical Journal.** 2007 93: 2418-2428
- 140) Jensen, P. E., Bassi, R., Boekema, E. J., Dekker, J. P., Jansson, S. Leister, D., Robinson C. and Vibe Scheller H. (2007) Structure, function and regulation of plant photosystem I. **Biochim. Biophys. Acta** 1767, 335-352.
- 139) Matsubara S., Morosinotto T., Osmond, C B. and Bassi R. (2007) Short- and long-term operation of the lutein-epoxide cycle in light-harvesting antenna complexes. **Plant Physiol.** 144: 926-941
- 138) Ballottari M., Dall'Osto L., Morosinotto T. and Bassi R. (2007) Contrasting behaviour of higher plant photosystem I and II antenna systems during acclimation. **J. Biol. Chem.** 282: 8947-8958
- 137) Croce R., Mozzo, M., Morosinotto, T., Romeo A., Hienerwadel, R. and Bassi R. (2007) Singlet And Triplet State Transitions Of Carotenoids In The Antenna Complexes (Lhca) of Higher Plants Photosystem I. **Biochemistry**, 46, 3846-3855

136) Georgakopoulou, S., van Amerongen, H., van der Zwan, G., Bassi R., van Grondelle, R., Croce, R. (2007) Understanding the circular dichroism of LHCII: a powerful tool for detecting structural changes. **Biochemistry**, 46 4745-4754.

135) Dall'Osto L., Cazzaniga S., North, H., Marion-Poll A., and Bassi R. (2007) The *aba4* mutant of *Arabidopsis thaliana* reveals a specific function for neoxanthin in protection against photooxidative stress. **The Plant Cell**, 19: 1048-1064.

134) Havaux, M. Dall'Osto, L. and Bassi R. (2007) Zeaxanthin has Enhanced Antioxidant Capacity with Respect to All Other Xanthophylls in *Arabidopsis* Leaves and functions independent of binding to PSII antennae. **Plant Physiology** 145:1506-1520.

133) Dall'Osto, L., Fiore, A., Cazzaniga, S., Giuliano G., and Bassi R. (2007) Different roles of alpha- and beta-xanthophylls in photosystem assembly and photoprotection. **J. Biol. Chem.** 282, 35056-35068.

132) Tzvetkova-Chevolleau, T., Frank, F., E. Alawady A., Dall'Osto, L., Carrière F., Bassi, R., Grimm, B., Nussaume, L., and Havaux M. (2007) The light stress-induced protein ELIP2 is a regulator of chlorophyll synthesis in *Arabidopsis thaliana*. **The Plant Journal**. 50, 795–809

2006

131) Mozzo, M., Morosinotto, T., Bassi, R., Croce, R. (2006) Probing the structure of Lhca3 by mutation analysis. **Biochim. Biophys. Acta**. 1757, 1607-13

130) Forti, G., Agostiano, A., Barbato R., Bassi, R., Brugnoli E., Finazzi G., Garlaschi F. M., Robert C. Jennings, Melandri B. A., Trotta M., Venturoli G., Zanetti G., Zannoni D., Zucchelli G. (2006) Photosynthesis research in Italy: a review. **Photosynthesis Research** 88, 211-240.

129) Fiore, A., L. Dall'Osto, R. Bassi and G. Giuliano (2006) Elucidation of the beta-carotene hydroxylation pathway in *Arabidopsis thaliana*. **FEBS Lett** 580(19):4718-22.

128) Morosinotto, T., Bassi, R., Frigerio, S., Finazzi, G. Morris, E. P. and Barber, J. (2006) Biochemical and structural analyses of a higher plant photosystem II supercomplex of a PSI-less mutant of barley: consequences of an extreme over reduction of the plastoquinone pool. **FEBS Journal** 273(20):4616-30.

127) Dall'Osto, L., Lico, C., Alric, J. Giuliano, G., Havaux, M., Bassi, R. (2006) Lutein is needed for efficient chlorophyll triplet quenching in the major LHCII antenna complex of higher plants and effective photoprotection in vivo under strong light. **BMC Plant Biology**, 6:32

126) Svensson J. T., Crosatti C., Campoli, C., Bassi, R., Stanca, A., Close, T. J. and Cattivelli, L. (2006) Transcription analysis of cold acclimation in barley *albina* and *xantha* mutants reveals the key role of the chloroplast during plant adaptation to low temperature. **Plant Physiology**, 141, 257–270.

125) Finazzi, G., Johnson G. N., Bonente, G., Dall'Osto L., Joliot, P., Bassi R., Wollman F-A. (2006) Non-photochemical Quenching of Chlorophyll Fluorescence in *Chlamydomonas reinhardtii*. **Biochemistry**. 7;45(5):1490-1498.

2005

124) Morosinotto T., Ballottari M., Klimmek F., Jansson S. and Bassi R. (2005) The association of antenna system to photosystem I in higher plants: cooperative interactions stabilizes the supramolecular complex and enhance red-shifted spectral forms. **J. Biol. Chem.** 280(35):31050-8

123) Zucchelli, G., Morosinotto, T., Garlaschi, F. M., Bassi, R. Jennings R. C. (2005) The Low Energy Emitting States of the Lhca4 Subunit of Higher Plant Photosystem I. **FEBS Letters** 579, 2072-76.

122) Carbonera D., Agostini G., T. Morosinotto, R. Bassi (2005) Quenching of chlorophyll triplet states by carotenoids in reconstituted Lhca4 subunit of peripheral light-harvesting complex of Photosystem I. **Biochemistry**, 44(23):8337-8346.

121) Gibasiewicz, K., Croce, R., Morosinotto, T., Ihalainen J. A., van Stokkum, I., Bassi, R., van Grondelle, R. (2005) Excitation energy transfer pathways in Lhca4. **Biophysical Journal**, 88(3) 1959–1969

120) Hienerwadel, R., Gourion, S., Ballottari, M., Bassi, R., Diner, B., and Berthomieu C. (2005) Formate binding near the redox-active TyrosineD in photosystem II: consequences on the properties of TyrD. **Photosynthesis Research** 2005;84(1-3):139-44.

119) Dall'Osto, L., Caffarri, S., Bassi, R. (2005) A mechanism of non-photochemical energy dissipation, independent from PsbS, revealed by a conformational change in the antenna protein CP26. **The Plant Cell**. 17(4):1217-32.

118) Matsubara, S., Naumann, M., Martin R., Nichol, C., Rascher, U., Morosinotto, T., Bassi, R. and Osmond, B. (2005) 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.** 56:461-468.

117) Caffarri, S., Frigerio, S., Olivieri E., Righetti P. G. and Bassi, R. (2005) Differential accumulation of Lhcb gene products in thylakoid membranes of Zea mays plants grown under contrasting light and temperature conditions. **Proteomics**, 5(3):758-768.

116) Morosinotto T, Mozzo M, Bassi R, Croce R. (2005) Pigment-pigment interactions in Lhca4 antenna complex of higher plants photosystem I. **J. Biol Chem.** 27, 280:20612-20619

115) Ihalainen, J.A., Croce, R., Morosinotto, T., van Stokkum, I.H.M., Bassi, R., Dekker, J.P.X. and van Grondelle. (2005) Excitation decay pathways of Lhca proteins: A time-resolved fluorescence study. **J. Phys. Chem. B** 109, 21150-21158.

2004

114) Croce, R., Morosinotto, T., Ihalainen, J. A., Chojnicka, A. Breton, J., Dekker J. P., R. van Grondelle and R. Bassi (2004). The chromophore organization of the Lhca2 subunit of higher plant photosystem I reveals the origin of its 701 nm fluorescence emission form. **J. Biol. Chem**; 279(47):48543-9

113) Finazzi, G. Johnson G. N., Dall'Osto L., Joliot, P. Wollman F.-A., Bassi R. (2004) A zeaxanthin-independent non-photochemical quenching mechanism localized in the Photosystem II core complex. **Proc. Natl. Acad. Sci. USA**, 101(33):12375-80.

112) Della Mea M., Di Sandro A., Dondini L., Del Duca S., Vantini F., Bergamini C., Bassi R. and Serafini-Fracassini (2004) Transglutaminase catalyses light dependent LHCII modification. **Planta**, 219(5):754-64.

111) Li, X-P, A. M. Gilmore, S. Caffarri, R. Bassi, T. Golan, D. Kramer, and K. K. Niyogi (2004) Regulation of photosynthetic light harvesting involves intrathylakoid lumen pH sensing by the PsbS protein **J. Biol. Chem.** 279, 22866-74.

110) Palacios, M., Caffarri, S., Bassi, R., van Amerongen, H., (2004) Stark effect measurements on monomers and trimers of reconstituted Light harvesting complex II. **Biochim. Biophys. Acta.** 1656:177-88

109) Caffarri, S., Croce, R., Cattivelli L. and Bassi, R. (2004) A look within LHCII: differential analysis of the Lhcb 1-3 gene products building the major trimeric antenna complex of higher plant photosynthesis. **Biochemistry** 43, 9467-9476.

108) Havaux M, Dall'Osto L, Cuine S, Giuliano G, Bassi R. (2004) The effect of zeaxanthin as the only xanthophyll on the structure and function of the photosynthetic apparatus in Arabidopsis thaliana. **J. Biol. Chem.** 279, 13878–13888.

2003

- 107) Croce, R., Müller, M. G., Bassi, R. and Holzwarth, A. R. (2003) Chlorophyll b to Chlorophyll a energy transfer kinetics in the CP29 antenna complex: a comparative femtosecond absorption study between native and reconstituted proteins. **Biophys. J.** 84: 2508-2516.
- 106) Croce, R., Müller, Caffarri, S., Bassi, R. and Holzwarth, A. R. (2003) energy transfer pathways in the minor antenna complex CP29 of Photosystem II: a femtosecond study of carotenoid to chlorophyll transfer on mutant and wt complexes **Biophys. J.** 84: 2517-2532.
- 105) Gastaldelli, M., Canino, G, Croce, R and Bassi, R. (2003) Xanthophyll binding sites of the cp29 (lhcb4) subunit of higher plant photosystem ii investigated by domain swapping and mutation analysis. **J. Biol Chem.** 278, 19190-19198.
- 104) Castelletti S, Morosinotto T, Robert B, Caffarri S, Bassi R., Croce R. (2003) Recombinant Lhca2 and Lhca3 subunits of the photosystem I antenna system. **Biochemistry.** 42(14):4226-34
- 103) Dal Bosco C., Busconi M, Govoni C, Baldi P., Stanca AM, Crosatti C, Bassi R., Cattivelli L. (2003) Cor Gene Expression in Barley Mutants Affected in Chloroplast Development and Photosynthetic Electron Transport. **Plant Physiol.** 131:793-802.
- 102) Dondini L, Del Duca S, Dall'agata L, Bassi R, Gastaldelli M, Della Mea M, Di Sandro A, Claparols I, Serafini-Fracassini D. (2003) Suborganellar localisation and effect of light on *Helianthus tuberosus* chloroplast transglutaminases and their substrates. **Planta.** 2003;217(1):84-95
- 101) Morosinotto, T., Caffarri, S., Dall'Osto, L. and Bassi, R. (2003) Mechanistic aspects of the xanthophyll dynamics in higher plant thylakoids. *Physiologia Plantarum*, 119:347-354
- 100) Matsubara, S., Morosinotto, T., Bassi, R., Pogson, B., Osmond, B. (2003) "Occurrence of the lutein-epoxide cycle in mistletoes of Loranthaceae and Viscaceae". **Planta** 217(6):868-79.
- 99) Morosinotto, T., Breton, J. Bassi, R. And Croce, R. (2003) The Nature Of A Chlorophyll Ligand In Lhca Proteins Determines The Far Red Fluorescence Emission Typical Of Photosystem I. **J. Biol Chem.**:278(49): 49223-9
- 98) Holt N. E., Kennis, J.T.M., Dall'Osto, L., Bassi R. and Fleming G. R. (2003) Carotenoid to chlorophyll energy transfer in light harvesting complex II from *Arabidopsis thaliana* probed by femtosecond fluorescence upconversion. **Chem. Phys. Lett.** 379,305-313.
- 97) Ihalainen JA, Ratsep M., Jensen PE, Scheller HV, Croce R, Bassi R, Korppi-Tommola JEI and Freiberg A (2003) "Red spectral forms of Chlorophylls in green plant PSI A site selective and High pressure Spectroscopy Study". **J. Phys. Chem. B** 107, 9086-9093
- 96) Vantini, F., G. Tacconi, M. Gastaldelli, C. Govoni, E. Tosi, P. Malacrinò, R. Bassi And L. Cattivelli (2003) Biodiversity of grapevines (*Vitis vinifera* L.) grown in the Province of Verona. **Vitis** 42, 35-38.
- 95) Crosatti, C., Marè, C. Mazzucotelli, E., Belloni, S., Barilli, S., Bassi, R, Dubkovski, J., Galiba, G., Stanca, AM, and Cattivelli, L. (2003) Genetic analysis of the expression of the cold-regulated gene *cor14b*: a way toward the identification of components of the cold response signal transduction in Triticeae. **Can. J. Bot** 81, 1162-1167

2002

- 94) T. Polívka, D. Zigmantas, V. Sundström, E. Formaggio, G. Cinque and R. Bassi (2002) The carotenoid S1 state in Recombinant Light Harvesting Complex of Photosystem II. *Biochemistry*, 41, 439-450
- 93) Zucchelli, G., Cinque, G., Bassi, R. and Jennings, R. (2002) The calculated in vitro and in vivo Chlorophyll a absorption bandshape (2001) **Biophys. J.** 82, 378-390.
- 92) Pascal, A.A., Croce, R., Sandonà, D., Bassi, R. and Robert, B. (2002) Chlorophyll a binding sites of CP29: a structural study by Resonance Raman Spectroscopy of recombinant proteins carrying mutations in binding residues, **Biochemistry** 41, 2305-2310.
- 91) Dominici, P., M. Crimi, S. Ceoldo, S. Caffarri, F. Armenante and R. Bassi (2002) Biochemical properties of the Photosystem II PsbS subunit subunit: either recombinant or purified from chloroplasts. **J. Biol. Chem.** 277, 22750-22758.

90) Croce R., Canino G., Ros F and Bassi R. (2002) "Chromophores organization of the higher plants photosynthetic antenna complex CP26", **Biochemistry**, 41, 7334-7343.

89) Croce R., Morosinotto T., Castelletti S., Breton J. and Bassi R. (2002) "The Lhca antenna complexes of Photosystem I from higher plants" **Biochim. Biophys. Acta**, 1556, 29-40.

88) Morosinotto T., Castelletti S., Breton J., Bassi R. and Croce R. (2002) "Mutation analysis of Lhca1 antenna complex: low energy absorption forms originate from pigment-pigment interactions" **J. Biol. Chem.** 277, 36253-36261.

87) Morosinotto, T., Baronio, R. and Bassi, R. (2002) Dynamics of Chromophore Binding to Lhc Proteins in Vivo and in Vitro during Operation of the Xanthophyll Cycle **J. Biol. Chem.** 277, 26913

2001

86) Swiatek, M., R. Kuras, A. Sokolenko, D. Higgs, J. Olive, G. Cinque, B. Müller, L. A. Eichacker, D. B. Stern, R. Bassi, R. G. Herrmann, and F.-A. Wollman (2001) The Chloroplast Gene *ycf9* Encodes a Photosystem II (PSII) Core Subunit, PsbZ, that Participates in PSII Supramolecular Architecture. **The Plant Cell** 13: 1347-1368

85) Caffarri, S., R. Croce, J. Breton and Bassi, R. (2001) The major antenna complex of photosystem II (LHCII) has a xanthophyll binding site not involved in light harvesting. **J. Biol Chem.** 276: 35924-35933.

84) Gobets, B., Kennis, J.T.M., Ihalainen, J.A., Brazzoli, M., Croce, R., van Stoccum, I.H.M., Bassi, R., Dekker, J.P., van Amerongen, H., Fleming, G.R., van Grondelle, R. (2001) Excitation energy transfer in dimeric light harvesting complex I: a combined streak-camera/fluorescence upconversion study. **J. Physical Chemistry**, 105, 10132-10139.

83) Moya, I., Silvestri, M., Vallon, O., Cinque G. and Bassi, R. (2001) Time resolved fluorescence analysis of the photosystem II antenna proteins in detergent micelles and liposomes. **Biochemistry**, 40, 12552- 12561.

82) Formaggio, E., Cinque, G., and Bassi, R. (2001) Functional Architecture of the major Light Harvesting Complex of Photosystem II. **J. Mol. Biol.** 314, (5), 1157 – 1166.

81) Crimi, M., Dorra, D., Bösinger, C., Giuffra, E., Bassi, R., and Holzwarth A. R. (2001) Fluorescence lifetime analysis of the recombinant photosystem II antenna complex CP29. Effects of zeaxanthin, pH and phosphorylation. **Eur. J. Biochemistry**, 268, 260-267.

2000

Jegershoeld C., Rutherford, A. W., Mattioli, T. A., Crimi, M. and Bassi, R. (2000) Calcium binding to the Photosystem II subunit CP29. **J. Biol. Chem.** 275: 12781-12788.

Croce, R., Cinque, G. Holzwarth, A. and Bassi, R. (2000) The Soret absorption properties of carotenoids and Chlorophylls in antenna complexes of higher Plants. **Photosynthesis Research.** 64, 221-231.

Cinque, G. Croce and Bassi, R. (2000) Absorption spectra of chlorophyll a and b in Lhcb protein environment. **Photosynthesis Research.** 64, 233-242.

Cinque, G., Croce, R., Holzwarth, A. and Bassi, R. (2000) Energy transfer among CP29 chlorophylls: calculated Förster rates and experimental transient absorption at room temperature. **Biophys. J.** 79, 1706-1717.

Ihalainen J. A. Gobets B. Sznee K., Brazzoli, M., Croce R., Bassi, R., van Grondelle R., J.E.I. Korppi-Tommola, Dekker Jan P. (2000) Evidence for two spectroscopically different dimers of light-harvesting complex I from green plants. **Biochemistry**, 39, 8625-8631.

Frank, H. A., Das, S. K., Bautista, J. A., Gosztola D., Wasielewski M. R, Crimi, M., Croce R. and Bassi, R. (2000) The Photochemical Behaviour of Xanthophylls In The Recombinant Photosystem II Antenna Complex, CP26. **Biochemistry**, 40, 1220-1225.

74) Croce R., Müller, M. G., Bassi, R. and Holzwarth, A. R. (2000) Carotenoid to Chlorophyll Energy Transfer in Recombinant Major Light-Harvesting Complex (LHC II) of Higher Plants with Various Carotenoid Contents. 1. Femtosecond Transient Absorption Measurements. **Biophys. J.** 80, 901-915.

73) Bassi, R. and Caffarri, S. (2000) Lhc proteins and the regulation of photosynthetic light harvesting function by xanthophylls. **Photosynthesis Research** 64, 243-256.

72) Pascal, A., Gastaldelli, M., Ceoldo, S., Bassi, R., Robert, B. (2000) Pigment conformation and pigment-protein interactions in the reconstituted Lhcb4 antenna protein. **FEBS Lett.** 492, 54-57.

1999

71) De Luca, C., Varotto, C., Svendsen, I., Polverino-De Laureto, P., and Bassi, R. (1999) Multiple Light Harvesting Complex II polypeptides are distinct gene products. *J. Photochem. Photobiol.*49, 50-60.

Verhoeven, A. S. Adams III W. W., Demmig-Adams, B. Croce R. & R. Bassi (1999) Xanthophyll cycle pigment localization and dynamics during exposure to low temperatures and light stress in low and high light-acclimated *Vinca major*. *Plant Physiol.* 120, 1-11.

Boekema, E., van Roon, H., Calkoen, F., Bassi, R. and Dekker, J. (1999) Different types of association of Photosystem II and its light harvesting antenna in partially solubilized photosystem II membranes. *Biochemistry*, 38, 2233-2239.

Crosatti C., Polverino de Laureto P., Bassi R., Cattivelli L. (1999) Expression of the cold-regulated barley gene pt59 and accumulation of its chloroplastic gene product are controlled by signals from the plastid and from the environment. *Plant Physiol.* 119(2):671-680.

Bassi, R., Croce, R., Cugini, D., and Sandonà, D. (1999) Mutation analysis of an higher plant antenna protein provides identification of chromophores bound into multiple sites. *Proc.Natl. Acad.Sci USA.*96, 10056-10061.

Croce, R. Weiss, S. and Bassi, R. (1999) Carotenoid binding sites of the major Light Harvesting complex (LHCII) of higher plants. *J. Biol. Chem.* 274: 29613-29623.

Croce R., Remelli, R., Varotto, C. Breton, J. and Bassi R. (1999) The neoxanthin binding site of the major light harvesting complex (LHCII) from higher plants. *FEBS Lett.* 456, 1-6.

Remelli, R., Varotto, C., Sandonà, D., Croce, R. and Bassi, R. (1999) Chlorophyll binding sites of monomeric recombinant light harvesting complex (LHCII) reconstituted in vitro. *J. Biol Chem.* 274, 33510-33521.

Simonetto, R. Crimi, M., Sandonà, D. Croce, R., Cinque, C. Breton, J. and Bassi, R. (1999) Orientation of chlorophyll transition moments in the higher plant light harvesting complex CP29. *Biochemistry* 38, 12974-12983.

62) Zolla L. Timperio AM. Testi MG. Bianchetti M. Bassi R. Manera F. Corradini D. (1999). Isolation and characterization of chloroplast Photosystem II antenna of spinach by reversed-phase liquid chromatography. *Photosynthesis Research.* 61(3):281-290.

1998

61) Mauro, S., Dainese, P., Lannoye, R. and Bassi, R. (1998) Cold-resistant and cold-sensitive maize lines differ in the phosphorylation of the photosystem II subunit CP29. *Plant Physiology*, 115, 171-180.

60) Bergantino, E., Sandonà, D., Cugini, D. and Bassi, R. (1998) The photosystem II subunit CP29 can be phosphorylated in both C3 and C4 plants as suggested by sequence analysis. *Plant Mol. Biol.* 36, 11-22.

59) Harrer, R., Bassi, R., Testi, M.-G. and Shaefer, C. (1998) Nearest-neighbour analysis of a new Photosystem II preparation from *Marcantia polymorpha* which contains reaction centre and antenna proteins. *Eur. J. Biochem.* 255, 196-205.

Ros, F., Bassi, R. and Paulsen H. (1998) Pigment binding properties of the recombinant Photosystem II subunit CP26 reconstituted in vitro. *Eur. J. Biochem.* 253, 653-658.

57) Ruban, A., Pesaresi, P., Bassi, R. and Horton, P. (1998) The relationship between the binding of dicyclohexyl carbodimide and pH-dependent quenching of chlorophyll fluorescence in the LHCIIa (CP29) subunit of photosystem II. *Biochemistry*, 37(33):11586-11591.

Pagano, A. Cinque G. and Bassi R. (1998) In vitro refolding of the recombinant photosystem II subunit CP24 (Lhcb6): identification of chlorophyll a and chlorophyll b absorptions. *J. Biol. Chem.* 273: 17154-17165

55) Sandonà, D., Croce, R., Pagano, A., Crimi, M. and Bassi, R. (1998) Higher Plants Light Harvesting Proteins: Structure and function as revealed by mutation analysis of either protein or chromophore moieties. *Biochim. Biophys. Acta.* 1365, 207-214.

1997

54) Pesaresi, P., Sandonà, D., Giuffra, E. and Bassi, R. (1997) A single point mutation (E166Q) prevents dicyclohexylcarbodiimide binding to the photosystem II subunit CP29. *FEBS Lett.* 402, 151-156.

53) Connelly, J.P., Muller, M.G., Bassi, R., Croce, R. and Holzwarth, A.R. (1997) Femtosecond Absorption Study of carotenoid to chlorophyll energy transfer in the Light Harvesting Complex II of Photosystem II. *Biochemistry* 36, 281-287.

52) Bassi, R., Sandonà, D. and Croce, R. (1997) Novel Aspects of Chlorophyll a/b binding proteins. *Physiologia Plantarum* 100, 769-779.

51) Giuffra, E., Zucchelli, G. Sandonà D. Croce R., Cugini, D., Garlaschi, F. M., Bassi, R. & Jennings, R. (1997) Analysis of some optical properties of a native and reconstituted photosystem II antenna complex, CP29: pigment binding sites can be occupied by chlorophyll a or chlorophyll b and determine spectral forms, *Biochemistry*, 36, 12984-12993.

50) Kilian, R., Bassi, R. and Schaefer, C. (1997) Identification and characterization of photosystem II chlorophyll a/b binding proteins in *Marcantia polymorpha* L. *Planta*, 204, 260-267.

1996

49) Giuffra, E., Cugini, D., Croce, R. and Bassi, R. (1996) Reconstitution and Pigment-binding properties of Recombinant CP29. *Eur. J. Biochem.* 238, 112-120

48) Croce, R., Breton, J. and Bassi, R. (1996) Conformational changes induced by phosphorylation on the Photosystem II subunit CP29. *Biochemistry* 35, 11142-11148.

47) Croce, R., Zucchelli, G., Garlaschi, F., Bassi, R. and Jennings, C.R. (1996) Excited State Equilibration in Photosystem I-Light -Harvesting I complex: P700 is almost isoenergetic with its antenna. *Biochemistry* 35, 8572-8579.

46) Testi, M.G., Croce, R., Polverino-De Laureto, P. and Bassi, R. (1996) A CK2 site is reversibly phosphorylated in the photosystem II subunit CP29. *FEBS Lett.* 399, 245-250.

1995

45) Bergantino, E., Dainese, P, Cerovic, Z. Sechi, S. and Bassi, R. (1995) A post-translational modification of the photosystem II subunit CP29 protects maize from cold stress. *J. Biol. Chem.* 270, 8474-8481.

44) Zucchelli, G., Garlaschi, F., .R. Croce, Bassi, R., and Jennings, R.C (1995) A Stepanov relation analysis of the steady state absorption and fluorescence spectra in the isolated D1/D2/cytochrome b559 complex (1994). *Biochim. Biophys. Acta*, 1229, 59-63.

43) Bassi, R., Marquardt, J. and Lavergne, J. (1995) Biochemical and functional properties of photosystem II in agranal membranes from maize mesophyll and bundle sheath chloroplasts. *Eur. J. Biochem.* 233, 709-719.

1994

42) Del Duca, S., Tidu, V., Bassi, R. and Serafini-Fracassini (1994) Identification of polyamine binding protein in *H. tuberosus* chloroplasts. *Planta*, 193, 283-289.

41) Santini, C., Tidu, V., Tognon, G., Ghiretti-Magaldi, A. and Bassi, R. (1994) Three dimensional structure of higher plants photosystem II reaction centre: evidences for its dimeric organization in vivo. *Eur. J. Biochem.* 221, 307-315.

40) Tremolières, A., Dainese, P. and Bassi, R. (1994) Heterogeneous lipid distribution among chlorophyll binding proteins of photosystem II in maize mesophyll chloroplasts. *Eur. J. Biochem.* 221, 721-730.

39) Zucchelli, G., Dainese, P., Jennings, R.C., Breton, J. and Bassi, R. (1994) Gaussian decomposition of absorption and linear dichroism spectra of outer antenna Complexes of photosystem II. *Biochemistry*, 32, 3203-3210.

38) Jennings, R.C., Zucchelli, G., Bassi, R., Vianelli, A., Garlaschi, F.M. (1994) The relation between the minor chlorophyll spectral forms and fluorescence quenching in aggregated light-harvesting chlorophyll a/b complex II (1994) *Biochim. Biophys. Acta* 1184, 279-283.

1992

37) Moran O., Sciancalepore M., Sandri G., Panfilì, Bassi R. and Sorgato M.C. (1992) Electrical Recording of Mammalian mitochondrial outer membrane in situ or reconstituted into liposomes. *Eur. Biophys. J.* 20, 311-319.

36) Bassi, R. and Dainese, P. (1992) A supramolecular antenna complex from the chloroplast photosystem II membranes. *Eur. J. Biochem.* 204, 317-326.

35) Jansson, S., Pichersky, E., Bassi, R., Green, B., Ikeuchi, M., Melis, A., Simpson, D.J., Spangfort, M, Staehelin, A and Thornber, J.P. (1992) A nomenclature for the genes encoding chlorophyll a/b binding proteins of higher plants. *Plant Molecular Biology Reporter*, 10, 238-250.

34) Bassi, R., Soen, S., Frank, G., Zuber, H. and Rochaix, J.D. (1992) Characterization of chlorophyll a/b proteins of Photosystem I from *Chlamydomonas reinhardtii*. *J. Biol. Chem.* 267, 25714 - 25721.

33) Jennings, R., Bassi, R., Garlaschi, F.M., Dainese, P. and Zucchelli, G. (1992) Distribution of the chlorophyll spectral forms in the chlorophyll-protein complexes of Photosystem II antenna. *Biochemistry* 32, 3203-3210.

32) Bassi, R., Pineau, B., Dainese, P. and Marquardt, J. (1993) Carotenoid binding proteins of photosystem II. *Eur. J. Biochem.* 212, 297-303.

31) Jennings, R., Bassi, R., Garlaschi, F.M., Dainese, P. and Zucchelli, G. (1992) Fluorescence analysis show complete equilibration of chlorophyll excited states within the higher plant Photosystem II light harvesting system. *Biochim. Biophys. Acta* 1183, 194-200.

30) Marquardt, J. and Bassi, R. (1992) The organization of photosynthetic antenna complexes in intermittent light grown plants. *Planta* 191, 265-273.

1991

29) Bassi, R. and Dainese, P. (1991) Reorganization of thylakoid membrane lateral heterogeneity following state I-state II transition. In: J. Akoyonoglou Eds. "Regulation of Chloroplast Development" pp 101-109.

28) Marquardt, J. and Bassi, R. (1991) Organization of Photosystem II in Intermittent light Grown maize plants. In: J. Akoyonoglou Eds. "Regulation of Chloroplast Development" pp 110-115.

27) Bassi R. and Wollman F.A. (1991): The chlorophyll a/b proteins of Photosystem II in *C. reinhardtii*: isolation, characterization and immunological cross-reactivity to higher plants polypeptides. *Planta* 183, 423-433.

26) Bassi R., Rigoni F. and Giacometti G.M. (1990) Chlorophyll binding proteins with antenna function in higher plants and green algae. *Photochemistry and Photobiology* 51, 1187-1206.

25) Bassi R., Silvestri M., Dainese P., Giacometti G.M. and Moya I. (1991) Detergent effect on spectral properties and aggregation state of Light Harvesting Chl a/b-protein complex (LHCII). *J. Photochem. Photobiol.* 6, 381-394.

24) Dainese P. and Bassi R. (1991): Stoichiometry of the chloroplast Photosystem II antenna system and aggregation state of the component Chl a/b proteins. *J. Biol Chem.* 266, 8136-8142.

23) Vallon, O., Bulte, L., Dainese, P., Olive, J., Bassi, R. and Wollman, F.A. (1991) Lateral redistribution of cytochrome b6/f complexes along thylakoid membranes upon state transitions. *Proc. Natl. Acad. Sci. USA* 88, 8262-8266.

1990

22) Giardi M.T., Barber J., Giardina M.C. and Bassi R. (1990): Studies on the herbicide binding site in isolated photosystem II core complexes from a flat bed isoelectrofocusing method. *Z. Naturforsch.* 45, 30-36.

21) Di Paolo M.L., Dal Belin-Peruffo A. and Bassi R. (1990): Immunological studies on chlorophyll a/b proteins and their location in thylakoid membrane domains. *Planta* 181, 275-286.

20) Dainese P., Hoyer-Hansen G. and Bassi R. (1990): The resolution of Chlorophyll a/b binding proteins by a preparative method based on flat bed isoelectric focusing. *Photochemistry and Photobiology* 51, 693-703.

1989

19) Bassi R., Ghiretti-Magaldi A., Tognon G., Giacometti G.M. and Miller K. (1989): Two dimensional crystals of Photosystems II reaction centre complex from higher plants. *Eur. J. Cell Biology* 50, 84-93.

1988

18) Hoyer-Hansen G., Bassi, R., Honberg L.S. and D.J. Simpson (1988) Immunological characterization of Chl a/b proteins of Barley thylakoids. *Planta* 173, 12-21.

17) Bassi R., Giacometti G.M. and Simpson D.J. (1988): Characterization of stroma membranes from Zea mays L. chloroplasts. *Carlsberg Res. Commun.* 53, 221-232.

16) Hoyer-Hansen G., Honberg L.S. and Bassi R. (1988): Probing in vitro translation products with monoclonal antibodies to chlorophyll a/b binding proteins of barley thylakoids. *Carlsberg Res. Commun.* 53, 297-308.

15) Bassi R., Giacometti G.M. and Simpson D.J. (1988): Changes in the organization of stroma membranes induced by in vivo State I-State 2 transitions. *Biochim. Biophys. Acta.* 935, 152-165.

14) Bassi R., Rigoni F., Barbato R. and Giacometti G.M. (1988): Light Harvesting Chlorophyll a/b-proteins in phosphorylated membranes. *Biochim. Biophys. Acta* 936, 29-38.

1987

13) Bassi R. and Simpson D.J. (1987): Chlorophyll-proteins of barley photosystem I. *Eur. J. Biochem.* 163, 221-231

12) Bassi, R., Simpson D., Barbato R., Hoyer-Hansen G. and Giacometti G.M. (1987): Chlorophyll-proteins of the PS II antenna system. *J. Biol. Chem.* 262, 13333-13341.

11) Ghisi R., Anaclerio F., Bassi, R. and Passera (1987): Light induced formation of Enzymes of the Sulphate assimilation Pathway in greening maize leaves. *Photosynthetica* 21, 253-260.

1986

10) Bassi R. (1986): Studies on the leaf of *Trapa natans*: polymorphism of chloroplasts and microbodies. *Cytobios* 45, 109-121.

9) Bassi R. and Simpson D.J. (1986): Differential expression of *chl a/b* genes in bundle sheath and mesophyll plastids of maize. *Carlsberg Res. Commun.* 51, 363-370

1985

8) Bassi R., Peruffo A., Barbato R. e Ghisi R. (1985): Differences in chlorophyll-protein complexes and composition of polypeptides between thylakoids from bundle sheath and mesophyll cells in maize. *Eur. J. Biochem.* 146, 589-595.

7) Bassi R. (1985): Spectral properties and polypeptide composition of the chlorophyll-proteins from granal and agranal chloroplasts of maize (*Zea mays* L.). *Carlsberg Res. Commun.* 50, 127-143.

6) Bassi R., Machold O. and Simpson D. (1985): Chlorophyll- proteins of two photosystems I preparations from maize. *Carlsberg Res. Commun.* 50, 145-162.

5) Bassi R., Hinz U. and Barbato R. (1985): The role of light harvesting complex and photosystem II in thylakoid stacking in the chlorina-f2 barley mutant. *Carlsberg Res. Commun.* 50, 347-367.

1977- 1982

4) Bassi R. - Indagini fisiologiche ed ultrastrutturali sull'effetto dell'illuminazione continua in *Zea mays* (1977). Tesi di laurea. Biblioteca del Dipartimento di Biologia, Università di Padova.

3) Bertoloni G., Bassi R., Conventi L. and Busolo F. (1980) : An extramembranous structure on the surface of mycoplasma cells after staining with ruthenium red. *Microbios Letters* 14, 125-130.

2) Bassi R. and C.Passera (1982): Effect of growth conditions on the conditions on the activity of carboxylating enzymes of *Zea mays* plants. *Photosynthesis Research* 4, 53-58.

1) Bassi R. (1982): Miglioramento genetico dei vegetali e protezione della natura. *Ambiente, Risorse, Salute* 8, 24-28.

Book Chapters

2014

34) Luca Dall'Osto, **Roberto Bassi** and Alexander Ruban (2014) Photoprotective mechanisms: carotenoids. In :” **PLASTID BIOLOGY**” S. M. Theg and Francis-André Wolman, Editors pp: 393-436.

33) Tomas Morosinotto* and **Roberto Bassi** (2014) Molecular mechanisms for activation of non-photochemical quenching: from unicellular algae to mosses and higher plants. In Demmig-Adams Ed. *The NPQ book*) pp: 315–331.

2012

31) Bassi, R, Cardol, P, Choquet, Y, de Marchin, T, Economou, C, Franck, F, Goldschmidt-Clermont, M, Jacobi, A, Loizeau, K, Mathy, G, Plancke, C, Posten, C, Purton, S, Remacle, C, Vejrazka, C, Wei, L, & Wollman, F.-A. (2012). Finding the bottleneck: a research strategy for improved biomass production. In C., Posten & C., Walter (Eds.), *Microalgal Biotechnology: integration and economy* (pp. 227-249). Berlin, RFA: de Gruyter.

30) Formighieri, C. and Bassi R. (2011) Algae as a “new” biomass resource – Possibilities and Constraints. In: “Encyclopedia of Sustainability Science and Technology (ESST)” Meyers, Robert A. (Ed.) ISBN 978-1-4419-0851-3. Springer Publishing.

2011

29) Morosinotto, T. and Bassi R. (2011) Assembly of Light Harvesting Pigment-Protein Complexes in Photosynthetic Eukaryotes. In: “Advances in Photosynthesis and Respiration” Eaton-Rye and Govindjie eds. Springer publishing. Pp.

2008

28) Govoni, C., Morosinotto, T. Giuliano, G. and Bassi R. (2008) Exploiting photosynthesis for biofuel production. In: In: Lorenzo Pavesi and Philippe M. Fauchet “Biophotonics 10.1007/978-3-540-76782-4_3. Springer Verlag.

27) Bonente, G., Dall’Osto L. and Bassi R. (2008) In between photosynthesis and photoinhibition: the fundamental role of carotenoids and carotenoid-binding proteins in photoprotection. In: L. Pavesi and P. M. Fauchet “Biophotonics 10.1007/978-3-540-76782-4_3. Springer Verlag.

26) Frigerio, S., Bassi R. and Giacometti G. (2008) Light conversion in photosynthetic organisms. In: In: Lorenzo Pavesi and Philippe M. Fauchet “Biophotonics 10.1007/978-3-540-76782-4_3. Springer Verlag.

2007

25) Morosinotto T. and Bassi R. (2007) Antenna system of higher plants Photosystem I and its interactions with the core complex. In : Renger, G., editor : “Primary processes of Photosynthesis” vol. 1, pp.301-328, RCS publishing

2006

24) Croce, R., Morosinotto, T. and Bassi, R. (2006) The Light harvesting proteins of Photosystem I. In: Goldbeck J., Ed. “ The photosystem I “ Advances in Photosynthesis and Respiration. pp 119-137.

2001

23) Caffarri, S., Croce, R., Cattivelli, L. and Bassi, R. (2001) The Lhcb1,2 and 3 gene products, component the trimeric antenna complex of higher plant photosystem II, have distinct biochemical and spectroscopic properties. Proc. XI Intl. Congress Photosynthesis.

22) Cinque, G., R. Croce and R. Bassi (2000). “Interfacing fast spectroscopy and molecular biology reveals mechanisms of light reactions in photosynthesis”, in Near Infrared Spectroscopy: Proceedings of the 9th International Conference, Ed by A.M.C. Davies and R. Giangiacomo. NIR publications, Chichester, pp. 483 - 486

1998

21) Croce, R. and Bassi, R. (1998) The Light Harvesting Complex of Photosystem I: pigment composition and stoichiometry. In : G. Garab Editor, “Photosynthesis: mechanisms and effects” 1, 421-424.

20) Crimi, M., Croce, R., Sandonà, D., Varotto, C., Simonetto, R. and Bassi, R. (1998) Mutation analysis of either proteins or Chromophore moieties in higher plants Light Harvesting proteins. In : G. Garab Editor, “Photosynthesis: mechanisms and effects” 1, 253-258.

19) Crimi, M. Dorra, D., Bosinnger, C., S., Giuffra, E. Bassi, R. Holzwarth, A.R. (1998) Zeaxanthin-induced fluorescence quenching in the minor antenna CP29. . In : G. Garab Editor, “Photosynthesis: mechanisms and effects” 1, 333-336.

1995

18) Pesaresi, P., Morales, F., Moya, I. and Bassi, R. (1995) Distribution of Xanthophyll cycle pigments in WT Arabidopsis and in a mutant blocked in zeaxanthin deepoxydation. in: P. Mathis, ed. " Photosynthesis: from Light to biosphere" IV, 95-98.

17) Jennings, R.C., Bassi, R. and Zucchelli, G. (1995) Antenna structure and energy transfer in higher plant photosystems. In: Electron transfer II. J. Mattay, Eds Topics in Current Chemistry- Springer Verlag, Berlin/Heidelberg, vol. 177, 148-181.

16) Giuffra, E., Cugini, D., Pagano, A. Sandonà, D., Croce, R. and Bassi, R. (1995) Reconstitution and pigment binding properties of recombinant CP29 and CP24. in: P. Mathis, ed. "Photosynthesis: from light to biosphere", 1, 271-274 .

15) Croce, R., Zucchelli, G., Garlaschi, F., Bassi, R. and Jennings, C.R. (1995) Thermal equilibration of excited states in antenna of PSI-200 in P. Mathis Ed.: "Photosynthesis: from light to biosphere", 1, 183-186

14) Bassi, R., Giuffra, E., Croce, R., Dainese, P. and Bergantino, E. (1996) Biochemistry and Molecular Biology of Pigment Binding Proteins. in: Jennings, Zucchelli, Ghetti, Colombetti, Eds. Light as Energy source and Information Carrier in Plant Photophysiology. NATO-Asi series pp. 41-63 Plenum-Press. NY.

Dainese, P., Bergantino, E., Sechi, S., Bassi, R. and Pichersky, E. (1995) cDNA-deduced sequences of maize CP24 and CP26, the two major zeaxanthin-binding proteins of Photosystem II. in: P. Mathis, ed. "Photosynthesis: from light to biosphere", 1, 199-202.

12) Yamamoto, H.Y and. Bassi, R. (1996) Carotenoids: Localization and function. In :Oxygenic Photosynthesis: the light reactions (D.R. Ort and C.F. Yokum Eds.)Advances in Photosynthesis pp539-563. Kluwer Acad. Publishers, Dordrecht. 1992

11) Dainese, P., Santini, C., Ghiretti-Magaldi, A., Marquardt, J., Tidu, V., Mauro, S. and Bassi, R. (1992) The organization of Pigment-proteins within photosystem II. In: N. Murata Ed. " Developments in Photosynthesis Research" pp. 13-20.

10) Jennings, R., Bassi, R., Zucchelli, G., Dainese, P. and Garlaschi, F.M. (1992) Equilibrium distribution of excited states in photosystem II antenna. In: N. Murata Ed. " Developments in Photosynthesis Research". pp.291-294.

9) Dainese, P., Marquardt, J., Pineau, B. and Bassi, R. (1992) Identification of Violaxanthin and Zeaxanthin binding proteins in maize photosystem II. In: N. Murata Ed. " Developments in Photosynthesis Research" pp.287-290.

1989

8) Bassi R. and Dainese P. (1989): The role of the light Harvesting Complex II and of the minor chlorophyll a/b proteins in the organization of the Photosystem II antenna system. In: M. Baltscheffsky (ed) Current Research in Photosynthesis 2, 209-216.

7) Dainese P., Di Paolo M.L., Silvestri M. and Bassi R. (1989): Properties of the minor chlorophyll a/b proteins CP29, CP26, CP24 from Zea mays Photosystem II membranes. In: M. Baltscheffsky (ed) Current Research in Photosynthesis 2, 249- 252. 1988

6) Simpson D.J., Bassi, R., Vallon O. and Hoyer-Hansen G. (1988): Location and organization of the chlorophyll-proteins of photosynthetic reaction centres in higher plants. In: D.O. Hall and Grassi (Eds) Photocatalytic production of energy rich compounds Elsevier Appl. Sci. Publ. Barking. pp. 195-209.

5) Rigoni F., Bassi R. and Giacometti G.M. (1988): Spectroscopic Characterization of Purified Chlorophyll a/b proteins CP29, CP26, CP24 from maize PSII antenna complex. In: Barber J. and Malkin R. (Eds) "Techniques and new developments in Photosynthesis research" Plenum Press, New York. 1987

4) Bassi, R., Simpson D., Barbato R., Hoyer-Hansen G., Hinz U. and Giacometti G.M. (1987): The role of LHCII in Thylakoid membranes. Progr. Photosynth. Res. vol. 2, 277-280.

3) Bassi, R. and Simpson D.J. (1987): Light Harvesting Chlorophyll-proteins of Barley photosystem I. Progr. Photosynth. Res. vol.2, 61-64.

2) Bassi, R. and Simpson D.J. (1987): The organization of Photosystem II chlorophyll-proteins. *Progr. Photosynth. Res.* vol.2, 81/88.

1) Simpson D.J., Bassi R. and Hinz U.G. (1987): Cell specific expression of LHCII and the organization of the photosynthetic reaction centre in chloroplast thylakoids. In: D. von Wettstein and N.H. Chua (Eds) *Plant Molecular Biology*. NATO ASI Series A. Plenum Publ. Corp. New York vol. 140, 93-104.

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