

Arthur R. Grossman
Curriculum Vitae

Professional Experience:

Present Position: Staff Member (Since 1982) Professor by Courtesy
 Carnegie Institution of Washington Department of Biology
 Department of Plant Biology Stanford University
 260 Panama Street Herrin Hall
 Telephone: (650) 325-1521

Past Position: Assist. Professor by Courtesy, 1982-1989, Dept of Biology, Stanford University
 Assoc. Professor by Courtesy, 1989-2000, Dept of Biology, Stanford University
 Chief of Genetics, Solazyme Inc, South San Francisco
 Consultant Martek
 Consultant Exelixis

Education and Research Experience:

Postdoctoral Fellow. 1978-1982. Rockefeller University, Department of Cell Biology. Uptake of Polypeptides into chloroplasts (postdoctoral adviser, Nam-Hai Chua)

PhD, 1978. Indiana University, Department of Biological Sciences. Characterization of Photosynthetic Mutants in *Chlamydomonas reinhardtii* (PhD adviser, Robert Togasaki)

BS with Honors, 1973. Brooklyn College, New York. Major in Biology

Honors, Services and Fellowships:

2018 Organizer of the International Conference on the Genetics and Molecular Biology of *Chlamydomonas* (Washington DC; June 17-23)

2018 Organizing Committee, International Conference on Microbial Photosynthesis (Vancouver)

2017 Edmond de Rothschild Chair (Fellowship to go to Paris, Laboratory of Francis André-Wollman for up to a year)

2017 Arnon Endowed Lecture – Berkeley (March 1, 2017)

2017 Chair of the Gordon Conference on Photosynthesis in 2017

2016 Member of the Review Panel for the Integrated Microbial Diversity Program of the Canadian Institute for Advanced Research

2015 Member Review Panel for Genomics and Synthetic Biology Program, NYU, Abu Dhabi

2015 Co-Chair of the Gordon Conference on Photosynthesis in 2015

2014 Visiting Scientist Fellowship - Department of Life and Environmental Sciences (DiSVA), Università Politecnica delle Marche (UNIVPM)

2014-17 Scientific Advisory Board, Boyce Thompson Institute

2014-2017 Steering Committee, University of Texas Culture Collection

2014 Panel Member to Review Science and Technology Center, University of Nebraska

2013 Organizer of Western Photosynthesis Conference – 2013

2013 Teacher 17th International Course of School of Pure & Applied Biophysics, Venice

2013 External examiner on Thesis defense of Laura Houille,

2013 Member of EU Sunbiopath evaluation committee (Jan 20-24)

2013 Panel Member to Review Science and Technology Center, University of Nebraska

2013 Review of Science and Technology Centers for NSF (Jan 13-15)

2012-2018 Co-editor-in Chief, Journal of Phycology
 2012 Co-organizer of Western Photosynthesis Conference
 2011/15 Steering Committee, University of Texas Culture Collection
 2011 Member of DOE Evaluation Committee, Plant Research Laboratory
 2011 Recipient of Lady Davis Fellowship
 2009 Steering committee, Joint Genome Institute
 2009 Recipient Gilbert Morgan Smith Medal (National Academy of Sciences)
 2008 National Resources Defense Council Algal Biofuels Advisory Committee
 2007 Editorial Board Eukaryotic Cell
 2008 Editorial Board Molecular Plant
 2005-9 Editorial Board Annu Rev Genet
 2004 Geographical represented for the International Society of Photosynthesis Research (elected position)
 2002 Darbaker Prize for work on microalgae (Botanical Society of America)
 2000-8 Editorial Board, Current Genetics
 2000-3 Scientific Advisory Board for the Wallenberg Consortium North
 2000 Advisory Committee, Arizona State University Consortium to establish a NSF funded Biotechnology Center
 2000-4 Editorial Board, Plant and Cell Physiology
 2000 Organizer of Symposium 'The Dynamics and Evolution of Light Harvesting Complexes (to honor Elizabeth Gantt)
 1999 Coorganizer of Symposium to Honor the retirement of Olle Björkman
 1998 Organizer of US-Japan Binational Meeting (Asilomar, CA)
 1997 Editorial Board, Journal of Phycology
 1996-8 Editorial Board, Journal of Biological Chemistry
 1996 Guest on the Editorial Board of the Annual Review of Genetics (1998, Vol. 32)
 1995 Plenary Lecture - Japan Society of Plant Physiologists (March)
 1995 Coordinator for the Organization of the Plant Biology Retreat
 1994 Member of AIBS panel to evaluate joint projects in plant biology
 1994 Editor-Seminars in Cell Biology "Light regulation in photosynthetic organisms" (Autumn, 1994)
 1994 Organizer of the Plant Biology Retreat
 1993 Guest on the Editorial Board of the Annual Review of Genetics (1995 Vol. 29)
 1993 Organizer Cyanobacterial Workshop at Asilomar
 1993 Guest Teacher in Marine Molecular Phycology Course at Friday Harbor
 1992 Recipient-Nehru University, Dept of Biotechnology Fellowship to work in India for 3 months (January - April 1992)
 1992 Guest Teacher in Marine Molecular Phycology Course at Friday Harbor
 1992 Organizer of the Carnegie Seminar Series
 1991 Member Photosynthesis Panel (USDA)
 1991 Help in organization of conference on tetrapyrrois (Solicited by Paul Castelfrance)
 1990 Editorial Board Journal of Plant Growth Regulation
 1989 Member NSF Panel - Postdoctoral Fellowship Awards
 1988 Organizer of the Carnegie Seminar Series
 1988 Participated in the organization of the C. Stacy French Symposium on Photosynthesis.
 1988 Member NSF Panel - Postdoctoral Fellowship Awards

- 1987 Member Program Committee “Mol Biol Cyanobacteria Workshop, St. Louis, MO, July 17-
- 1987 Member of Photosynthesis Panel (USDA)
- 1987 Organizer of the Carnegie Seminar Series
- 1987-93 Editorial Board Plant Physiology
- 1985 Guest Member of Editorial Board for the Annu Rev Plant Physiology (1987 Vol.)
- 1985 Member of Plant Molecular Biology Panel (USDA)
- 1984 Member of NIH Postdoctoral Fellowship Panel
- 1979-81 National Institute of Health Postdoctoral Fellowship
- 1977 Floyd Fellowship
- 1974-97 National Science Foundation Predoctoral Fellowship
- 1972 L. Whorley Award in Biology
- 1968-72 New York State Regents Scholarship
- Phi Beta Kappa
- American Society of Plant Physiologists

1982-2016 Numerous ad hoc reviews for NSF, DOE and USDA, and some for NIH (as well as for a number of international agencies). I have also completed numerous reviews for a variety of journals including Science, Nature, PNAS, The Plant Cell, EMBO Journal, The Plant Journal, Molecular Microbiology, Plant Physiology and Journal of Bacteriology. I have also been on many committees and panels to help evaluate scientific directions for the various granting agencies [Systems Biology approaches for future development, for the National Academy of Sciences (algal biofuels), NASA program for experiments in the shuttle, NRDC advisory board etc]. Furthermore, I have reviewed many tenure packages and have evaluated many biology programs and have been instrumental in recently getting the Journal of Phycology indexed in PubMed (started in summer of 2016).

Teaching activities – Current/Ongoing:

1. Thirteen lectures in course on algae and fungi (offered once every couple of years).
2. Lectures in Plant Molecular Biology course (every time it is offered).
3. Lectures in Plant Biochemistry course (every other year).
4. Plant Physiology lectures. Selected lectures in 2000 and 2001 on the molecular aspects of anion assimilation.
5. Biology 301. A lecture each year to introduce students to work in my laboratory (every year).
6. Lecture every year (2006-2013) in Hopkins Microbiology Course (hosted by Alfred Spormann).
7. 2009 – Freshman course at Stanford University – From Photosynthesis to biofuels.
8. 2010 - Week-long course in Eilat, Israel – The Acclimation of Photosynthetic Organisms to their Environment
9. 2012 – Freshman course at Stanford University – From Photosynthesis to Biofuels; Energy for the Future
10. 2013 – Bioengineering - The GreenCut and Identifying Proteins Critical for Photosynthesis
11. 2014 – Ancona Italy – Algal physiology, biochemistry, and genetics – Three lectures - Light and photosynthetic organisms. 2. Acclimation to changing nutrient conditions. 3. The coral reefs and the interaction between an alga and its host
12. 2018 Teaching in summer school in Shantou University (August 16-23) – From endosymbiosis to organelle evolution and the biogenesis of an organelle.

Previous Teaching Experience:

- 1976 Indiana Univ., Laboratory section of the Physiology Course
- 1984, 1990 Stanford Univ., Course on Algae and Fungi (with Sarah Fultz) - thirteen lectures each time

- 1987-1995 Stanford Univ., Plant Molecular Biology and Plant Biochemistry courses (team taught; Sharon Long, Virginia Walbot, Peter Ray, and Neil Hoffman). Generally, I give between 5 and 10 lectures a year for various courses in the Biology Department of Stanford University
- 1983-1993 Helped in organization of several seminar courses. Gave two or three lectures in Biology 301 per year
- 1993-2017 Numerous guest lectures in various courses including Plant Biochemistry, Marine Microbiology (Hopkins Marine Station), Plant Molecular Biology
- 1992/1993 Course on Molecular Biology of Marine Algae (with Lynda Goff and Annette Coleman)

Masters Students (3)

Amy Spater (1990) Unkown.

John Quisel (1997) Senior Vice President of Business Development of Acceleron Pharma, Inc.

Claire Granger (1999) Marketing agent for Clonotech.

Former PhD Students (15 Total):

Laura Green, PhD, 1988. Sulfur Acquisition in *Anacystis nidulans*. Current Position: Working as editor, Amherst, MA.

Eugenio de Hostos, PhD, 1988. The De-repressible Arylsulfate in *C. reinhardtii*. Current Position: Manager of Corporate Partnering & Portfolio Development at the Non-profit Institute for One World Health.

Jackie Collier, PhD, 1995. Degradation and Biosynthesis of Phycobilisomes and Assembly of the Photosynthetic Apparatus in *Anacystis nidulans*. Current Position: Associate Professor, SUNY Stony Brook Marine Sciences Research Center.

Elena Casey, PhD, 1996. Molecular Genetic Analysis of Complementary Chromatic Adaptation. Current Position: Professor, Georgetown University, Department of Biology (Chair of Department).

Dennis Wykoff, PhD, 1999. Acclimation of *Chlamydomonas reinhardtii* to Phosphate Limitation. Current Position: Associate Professor, *Dennis M. Cook Endowed Gregor Mendel Chair in Genetics*. Villanova University, Department of Biology.

Claire Grainger, Masters, 1999. Acclimation of Arabidopsis to Phosphorus Limitation. Current Position: Scientific & Healthcare Research at KnowledgePoint360 Group.

Melissa Adams, Masters, 2008. Cyanobacteria of the Hotsprings. Current Position: Technology Specialist at Clark & Elbing LLP.

Blaise Hamel, Masters, 2008. Photosynthesis at High Temperatures. Current Position: Pharmacist.

Wirulda Pootakham, PhD, 2010. Sulfur Deprivation in *Chlamydomonas*. Current position: Senior Researcher in the National Center for Genetic Engineering and Biotechnology, Thailand.

Kate Mackey, PhD, 2010 (joint with Adina Paytan). Photosynthesis and Nutrient Deprivation Responses in Marine Cyanobacteria. Current Position: Assistant Professor, UC Irvine.

Leonardo Magneschi, PhD, 2012. Anoxic Metabolism in Algae and Plants, PhD (joint with Pierdomenico Perata). Current Position: Research Scientist Cell and Plant Physiology Laboratory, CEA Grenoble (joint appointment with Total Company).

Laura Houille (visiting graduate student from the Laboratory of Francis Andre Wollman). Working toward a PhD. The GreenCut and understanding the functions of unknown proteins associated with photosynthesis.

Zubin Huang. PhD, 2014 (joint with Fritz Prinz). Examination of Photosynthetic Function using AFM. Current Position: Research Scientist at Applied Materials (company in Bay Area).

Tyler Wittkopp, PhD. Postdoctoral Fellow with Joseph Noel, Salk Institute.

Witchukorn Phuthong, PhD. Staff Scientist, Thailand Innovation Agency.

Former Postdoctoral Fellows/Research Associates (38 Total):

- John Coleman, 1984. Current Position: Dept. of Botany, Univ. of Toronto, Professor (former Chair of the Department).
- Terri Lomax, 1986. Current Position: Professor; Executive Vice President, Discovery-Science-Technology at RTI International, Raleigh, North Carolina.
- Peggy Lemaux, 1987. Current Position: Professor; Dept. of Molecular Plant Biology, Univ. of California-Berkeley.
- Pamela Conley, 1988. Current Position: Vice President, Biology at Portola Pharmaceuticals, San Francisco Bay Area Biotechnology.
- Maryse Block, 1988. Current Position: Senior Staff Scientist; Laboratoire de Physiologie Cellulaire Végétale, Unite Mixte de Recherche 5168, Centre National de la Recherche Scientifique Commissariat à l'Énergie Atomique Université Joseph Fourier Institut National de la Recherche Agronomique, 38054 Grenoble, France.
- Nancy Federspiel, 1989. Senior scientist, Human Genome Project, Department of Genetics Stanford University
- Lamont Anderson, 1990. Current Position: Professor; Dept. of Biology, Colorado College.
- David Laudenbach, 1991. Current Position: Assistant Professor; Univ. of Western Ontario, London, Ontario, Canada, Assistant Professor (Deceased).
- Jill Ray, 1991. Current Position: Scientific Manager, Companion Diagnostic Development at Genentech San Francisco Bay Area Biotechnology.
- Gisela Chiang, 1992. Current Position: Associate Director at Biogen Idec/Baxter, Boston, MA.
- Michael Schaefer, 1993. Current Position: Chief, Translational Centers of Excellence and Research Coordination Section National Institutes of Health, Washington, DC.
- Kirk Apt, 1996. Current Position: Vice President of Research; Martek Biosciences Corporation, Columbia, MD (deceased).
- Peter Kroth, 1995. (Research Fellow). Current Position: Professor, University of Konstanz, Germany.
- Kris Niyogi, 1997. Current Position: Professor and Chair. Department of Plant and Microbial Biology, University of California, Berkeley, CA.
- John Davies, 1998. Current Position: Scientist. Scientist at Dow AgroSciences, Portland, OR.
- David Kehoe, 1998. Current Position: Professor; Department of Biology, Indiana University, Bloomington, IA,
- Rakefet Schwarz, 2000. Current Position: Senior Lecturer; Bar Ilan University, Tel Aviv, Israel.
- Lorraine van Waasbergen, 2000. Current Position: Professor, Biology Department, University of Texas in Arlington.
- Devaki Bhaya, 2001. Current Position: Staff Associate; Carnegie Institution for Science. Courtesy Professor; Department of Biology, Stanford University.
- Hideki Takahashi, 2001. Current Position: Associate Professor; Department of Biochemistry and Molecular Biology, Michigan State University.
- Qingfang He, 2002. Current Position: Professor; Department of Applied Science, University of Arkansas, Little Rock.
- Wing-On Ng, 2002. Current Position: Senior Scientist/Project Manager; MBI (Michigan Biotechnology Institute).
- Chung-Soon Im, 2006. Current Position: CEO; Phycoil Biotechnology International, Inc and Phycoil Biotech Korea.
- Oliver Kilian, 2007. Current Position: Aurora Biotechnology.
- Anne Steunou, 2007. Current Position: CNRS, Gif-sur-Yvette.

David Gonzalez-Ballester, 2008. Current Position: Assistant Professor equivalent, University of Cordoba, Spain.

Florence Mus, 2008. Current Position: Junior Manager, Metabolic Explorer, Research Associate, Washington State University.

Jeffrey Moseley, 2009. Current Position: Researcher ; Solazyme Biofuels.

Shaun Bailey, 2009. Current Position: Director of Photosynthesis Research; Synthetic Genomics.

Nakako Shibagaki, 2010. Current Position: Osaka University, Assistant Professor ; Currently Manager at L'Oreal, Kawasaki, Kanagawa, Japan.

Jean Alric, 2013. Current Position: CNRS position; Research Position, France (Cadache).

Xenie Johnson, 2013. Current Position: CEA Research Engineer; Institute of Biotech. Environ. Biology, Cadache, 13108 Saint-Paul-lez-Durance, France.

Mark Heinnickel, 2013. Current Position: Synthetic Genomics.

Dimitri Tolleter, 2014. Current Position: IRHS Team, University of Angers, France.

Eva Nowack, 2014. Current Position: Heinrich-Heine-Universität Düsseldorf (Assistant Professor).

Munevver Aksoy, 2015. Current Position: Assistant Professor, Agricultural Biotechnology Department, Akdeniz University, Turkey.

Claudia Cattalanotti. 2015. Current Position: TenX Genomics (Senior Research Scientist).

Ru Zhang, 2016. Current Position: Staff Scientist, the Danforth Center.

Wenqiang Yang, 2017. Current Position: Assistant Professor and awardee of the 1000 Young Talents Program, Botanical Institute, Beijing, China.

Adam Idoine, 2017. Current Position: Research Scientist, Safetraces.

Yuval Kaye, 2018. Faculty, The Ramat Negev International Center for Advanced Agricultural Training

Sophie Clowez, 2018. Postdoc with Sue Rhee, The Carnegie Institution for Science

Present Graduate Students:

Rick Kim. Elucidating the functions of proteins in the GreenCut

Present Postdoctoral Fellows/Research Associates:

Emanuelle Sanz Luque. Responses of algae to sulfur deprivation

Weichao Huang. Moving reductant from chloroplasts – the functions of shuttles

Tingting Xiang. Interactions of Symbiodinium in the endosymbiosis of coral reefs

Shai Saroussi. The GreenCut and photosynthetic function

Weimin Ni. LHCSR and nonphotochemical quenching

Academic/Industrial Affiliations:

Joint project with Martek Biosciences Corporation in Columbia, MD. Molecular manipulation of chromophytic algae to facilitate production of metabolites and specific lipids (1993-2000)

Consultant for Exelixis Pharmaceuticals (1995-2001)

Martek Inc (1997-2002)

Chief of Genetics, Solazyme (2007-2015) – I function as a high level consultant mostly for the biotechnological aspects of working with the algae

Phoenix Bioinformatics (2013-Current) – Board of Directors

AppliColor (2016) – Consultant on the use of light as a diagnostic

Checkerspot (2016) – Advisory Board

Phycoil (2016) – Advisory Board

External Support and pending grants (shown from 1995):

2018-2021 Elucidating the transition to eukaryotic phototrophy. Submitted as preproposal to NASA with Debashish Bhattacharya, Dana Price and Desmond Lun. In Submission.

2018-2021 The 18th International Conference on the Cell and Molecular Biology of Chlamydomonas. Funded by DOE. Funded.

2018-2020 Dissecting the Role of Alternative Oxidases in Electron Flow, O₂ Reduction and Cellular Redox Balancing. DOE-BES. \$394,000. Funded.

2018-2019 The 18th International Conference on the Cell and Molecular Biology of Chlamydomonas. Submitted to NSF. Funded.

2018-2021 Integrated view of photosynthetic control in response to light and metabolic signals. HSFP project. \$300,000. In a consortium with Dimitros Petroustos, Chuan He, Zoran Nikoloski. Funded.

2018-2021 Where have all of the electrons gone? Understanding the role of alternative electron flow and O₂ reduction in balancing cellular redox (DOE-BES Grant in collaboration with Matthew Posewitz. Funded for 1 year at \$100,000 (with encouragement to reapply; reapplication has been submitted)

2017 For support of The Gordon Research Conference on Photosynthesis: Photosynthetic plasticity; From environment to synthetic systems (DOE and NSF) (Funded by both NSF and DOE; \$10,000 from NSF, \$10,040 from DOE)

2017-2020 Functional-genomics tools for cnidarian-dinoflagellate symbiosis (Edge Grant with Virginia Weis, John Pringle and others, in review) (\$475,000)

2016 Carnegie Venture Competitive Grant for developing new coral system (\$100,000).

2014-2017 Coral resilience investigated in the field and via a sea anemone model system (Moore Foundation – \$533,008)

2014-2017 Unraveling the mechanisms that enables record high growth and photosynthetic rates in a newly isolated *Chlorella* sp. from desert crusts (NSF, approved pre-proposal; joint grant with Aaron Kaplan at Hebrew University)

2013 The Western Photosynthesis Conference, 2013 (NSF \$10,596)

2012-2015 A window into the evolution of plastids (NSF \$320,000 total)

2011-2014 Understanding the death of the coral reefs and the role of the algal endosymbiont (\$596,000)

2012-2015 A mutant resource to transform reverse genetics in *Chlamydomonas reinhardtii* (with Martin Jonikas) (NSF \$2,661,285)

2012-2015 Biochemical integration of metabolic networks critical for energy transformation in *Chlamydomonas reinhardtii* (DOE \$330,000)

2010-2014 From the genome to photosynthetic function (NSF \$732,000 total)

2010-2012 The *Porphyra* model system and the need for transformation (NSF \$65,362 total)

2008-2011 Acclimation of Chlamydomonas to sulfur deprivation conditions (NSF \$450,000 total)

2007-2010 Filling knowledge gaps in biological networks: Integrated global approaches to understand H₂ metabolism in *Chlamydomonas reinhardtii* (NSF \$600,000 total)

2003-2010 Chlamydomonas genomics: Photosynthesis and acclimation (NSF \$3,197,682).

2004-2008 Probing acclimation responses in *Prochlorococcus* ecotypes through analyses of global gene expression. NSF Oceanography (\$500,000 total)

2004-2007 Generation of bioelectricity in algae. GCEP (\$450,000 total)

2003-2008 Do species matter in microbial communities? NSF (\$5,000,000 - total for the consortium)

2004-2006 The role of the STAS domain in sulfur deprivation. USDA (180,000)

2003-2008	Chlamydomonas genomics: Photosynthesis and acclimation. NSF (\$3,100,000 - total for the consortium)
2002-2004	Acclimation of Chlamydomonas to phosphorus starvation. USDA (\$90,000)
2001-2005	Genetic dissection of photoprotection and characterization of <i>npq</i> mutants. NSF (\$460,000)
2001-2002	Global analysis of acclimation processes in cyanobacteria. NSF (\$100,000)
2000-2003	Analysis of gene expression during acclimation of cyanobacteria to stress conditions. NSF International Program (\$21,000). This grant is for travel and collaborative work with Daniel Vaultot in Roscoff
1999-2002	Analysis of the <i>Chlamydomonas reinhardtii</i> genome: A model unicellular system for analyzing gene function and regulation in vascular plants. NSF (\$3,300,000, approximately \$2,000,000 of that comes to Carnegie and the rest to other institutions that are participating in the project)
1998-2001	Dissection of nutrient deprivation responses in cyanobacteria. NSF (\$300,000)
1998-2001	Defining the regulation of the blue/UV-A light inducible <i>hliA</i> gene. USDA (\$210,000)
1998-1999	US-Japan Binational Conference; The effects of environmental conditions on CO ₂ fixation and the photosynthetic apparatus. NSF (\$12,000)
1998-2000	The use of transformation in diatoms. NSF/Martek Corporation (subcontract for \$150,000)
1996-1999	Acclimation of Chlamydomonas to sulfur limitation: Regulation and survival. USDA (\$202,000)
1996-1999	Photobiology and genetic analysis of complementary chromatic adaptation. NSF (\$300,000)
1996-1999	The acclimation of a photosynthetic eukaryote to phosphorus limitation. NSF International Program (33,000). Collaborative work with Hideaki Usuda and Kosuke Shimogawara
1997-1999	High light and blue-UV-A regulated light responses in photosynthetic organisms. USDA (\$140,000)
1994-1996	NblA/TxIA and the biosynthesis of the photosynthetic apparatus. USDA (\$100,000)
1993-1996	Gene transfer in marine algae. Martek (\$72,000)
1992-1995	Regulation and targeting of light harvesting proteins in marine diatoms. NSF (\$230,000). Neil Hoffman as co-PI

Publications

1. Wittkopp, T., Heinnickel, M., Kim, R., Yang, W., Niyogi, K., **Grossman**, A.R. (2018) The GreenCut protein CPLD49 and its function in maintaining the stability of the cytochrome *b₆f* complex. *Plant Journal*. 94:1023-1037.
2. Foo, S.A., Liddell, L., **Grossman**, A.R., Caldeira, K. (2018) Photo-movement in the sea anemone *Aiptasia* influenced by light quality and symbiotic association. *Coral Reefs*. In Submission.
3. Halim, R., Hill, D.R.A., Hanssen, E.G. Webley, P.A., Blackburn, S, **Grossman**, A.R., Posten, C., Martin, G.J.O. (2018) Induction of autolytic cell-wall self-ingestion in lipid-rich *Nannochloropsis* under thermally coupled dark-anoxia incubation. In Press.
4. Petroustos, D.,..... **Grossman**, A.R. et al. (2018) Carbon metabolism controls photoprotection in *Chlamydomonas* via the light harvesting complex stress response protein LHCSR3. In Preparation.

5. Sasso, S., Stibor, H., Mittag, M., **Grossman**, A.R. (2018) The natural history of model organisms: From molecular manipulation of domesticated *Chlamydomonas reinhardtii* to survival in nature. eLife. Elife. 2018 Nov 1;7. pii: e39233. doi: 10.7554/eLife.39233.
6. Xiang, T., Lehnert, E., Clowe, C., Pringle, J., DeNofrio, J.C., **Grossman**, A.R. (2018) Integration of nitrogen and carbon metabolism in the *Symbiodinium* cnidarian association. In Submission.
7. **Grossman**, A.R., Sanz-Luque, E., Yi, H., Yang, W. (2018) Building the GreenCut2 suite of proteins to unmask photosynthetic function and regulation. Microbiology. In Press.
8. Sanz-Luque, E., Saroussi, S., **Grossman**, A.R. (2018) The role of the polyphosphate in control cellular acclimation processes. In Preparation.
9. Saroussi, S., Karns, D., Thomas, D., Posewitz, P., **Grossman**, A.R. (2018) Alternative outlets for sustaining photosynthetic electron transport during dark to light transitions. Proc Natl Acad Sci USA. In Revision.
10. Saroussi, S., Karns, D., Thomas, D., Posewitz, M., **Grossman**, A.R. (2018) Electron flow in *Chlamydomonas reinhardtii* in the absence of major energy sinks and reversible inactivation of cytochrome *b₆f*. In Preparation.
11. Fan, J., Zheng, I., Bai, Y., Saroussi, S., **Grossman**, A.R. (2018) Flocculation of *Chlamydomonas reinhardtii* with different phenotypic traits by metal cations and high pH. Frontiers in Plant Science. Nov 20;8: 1997. doi: 10.3389/fpls.2017.01997.
12. Kaye, Y., Huang, W., Saroussi, S., Idoine, A., Clowe, S., Sanz-Luque, E., **Grossman**, A.R. (2018) *Chlamydomonas reinhardtii* Mitochondrial Alternative Oxidases Allows Survival in High Light. J Biol Chem. pii: jbc.RA118.004667. doi: 10.1074/jbc.RA118.004667. PMID: 30510139.
13. Clowe, S., Renicke, C., Saroussi, S., **Grossman**, A.R. (2018) Induction of bleaching of *Aiptasia* by Menthol and the associated loss of photosynthetic function in the *Symbiodinium* symbiont. In Preparation.
14. Mathews, J.L., Oakley, C.A., Lutz, A., Hillyer, K.E., Roessner, U., **Grossman**, A.R., Weis, V.M., Simon, S.K. (2018) Partner switching and metabolic flux in a model cnidarian–dinoflagellate symbiosis. Proceedings Royal Society B. 28:285.
15. Sproles, A.E., Oakley, C.A., Mathews, J.L., Peng, L., **Grossman**, A.R., Weis, V.M., Davy, S.K. (2019) The host, proteome reveals nutrient exchange and cell recognition mechanisms altered by a novel cnidarian–*Symbiodinium* symbiosis. In Submission.
16. Clowe, S., Cleves, P., Krediet, C.J., Pringle, J., **Grossman**, A.R. (2018) Sugar impacts photosynthetic activity and symbiont capacity of *Symbiodinium* sp. In Preparation.
17. Li X., Patena W., Fauser F. Jinkerson RE, Saroussi S, Ivanova N, Robertson JM, Yue R, Zhang R, Vilarrasa-Blasi J, Ramundo S, Blum SR, Goh A, Laudon IM, Lefebvre PA, **Grossman** AR, Jonikas MC (2018) A genome-wide algal mutant library reveals a global view of genes required for eukaryotic photosynthesis. Nature Genetics. In Press.
18. Esherick, L.Y., DeNofrio, J.C., Krediet, C.J., Tolleter, D., Xiang, T., **Grossman**, A.R., Pringle, J.R. (2017) Relative contributions of host and algal genotypes to bleaching susceptibility in a cnidarian-dinoflagellate symbiosis. In Preparation.

19. Xiang, T., Jinkerson, R.E., Clowez, S., Tran, C., Krediet, C.J., Onishi, M., Pringle, J.R., **Grossman**, A.R. (2018) Glucose-induced trophic shift of a clade B *Symbiodinium* strain and its physiological and molecular consequences. *Plant Physiol.* Dec 7. pii: pp.01572.2017. doi: 10.1104/pp.17.01572.
20. Sproles, A.E., Kirk, N.L., Kitchen, S.A., Oakley, C.A., Weis V.M., **Grossman**, A.R., Davy, S.K. (2018) Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis. *Mol Phylogenet Evol.* 120:307-320.
21. Hong, H., Kim, J.A., Han, M., Yoo, G., Song, H.W., Chae, Y., Pyun, J.-C., **Grossman**, A.R., Ryu, W.H. (2018) Prolonged and Highly-efficient Intracellular Extraction of Photosynthetic Electrons from Single Algal Cells by Optimized Nanoelectrode Insertion. *Nano Research.* 11: 397-408.
22. Schroda M, **Grossman** AR (2017) Christoph Beck (1941-2017): a *Chlamydomonas* biologist. *Photosyn Res.* Sep 18. doi: 10.1007/s11120-017-0431-6.
23. Oakley CA, Durand E, Wilkinson SP, Peng L, Weis VM, **Grossman** AR, Davy SK. (2017) Thermal shock induces host proteostasis disruption and endoplasmic reticulum stress in the model symbiotic cnidarian *Aiptasia*. *J Proteome Res.* 16(6):2121-2134.
24. Mathews, J.L., Crowder, C.M., Oakley, C.A., Lutz, A., Roessner, U., Meyer, E., **Grossman**, A.R., Weis, V.M., Davy S.K. (2017) Optimum nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis. *Proc Natl Acad Sci USA.* 2017 Dec 12;114(50):13194-13199.
25. Brodie, J., Chan, C.X., De Clerck, O., Cock, J.M., Coelho, S.M., Gachon, C., **Grossman**, A.R., Mock, T., Raven, J., Smith, A., Yoon, H.S., Bhattacharya, D. (2017) The algal genomic revolution. *Trends in Plant Sciences.* Jun 10. pii: S1360-1385(17)30105-X. doi: 10.1016/j.tplants.2017.05.005.
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