

# Stanford

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## Arthur Grossman

Professor (by Courtesy)

Biology

 Curriculum Vitae available Online

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### Bio

#### BIO

Arthur Robert Grossman (born 1950): Arthur Grossman has been a Staff Scientist at The Carnegie Institution for Science, Department of Plant Biology since 1982, and holds a courtesy appointment as Professor in the Department of Biology at Stanford University. He has performed research across fields ranging from plant biology, microbiology, marine biology, ecology, genomics, engineering and photosynthesis and initiated large scale algal genomics by leading the *Chlamydomonas* genome project (sequencing of the genome coupled to transcriptomics). During his tenure at Carnegie, he mentored more than fifteen PhD students and approximately 40 post-doctoral fellows (many of whom have become very successful independent scientists at both major universities and in industry). In 2002 he received the Darbaker Prize (Botanical Society of America) for work on microalgae and in 2009 received the Gilbert Morgan Smith Medal (National Academy of Sciences) for the quality of his publications on marine and freshwater algae. In 2015 he was Vice Chair of the Gordon Research Conference on Photosynthesis and in 2017 was Chair of that same conference (Photosynthetic plasticity: From the environment to synthetic systems). He also gave the Arnon endowed lecture on photosynthesis in Berkeley in March of 2017, has given numerous plenary lectures and received a number of fellowships throughout his career, including the Visiting Scientist Fellowship - Department of Life and Environmental Sciences (DiSVA), Università Politecnica delle Marche (UNIVPM) (Italy, 2014), the Lady Davis Fellowship (Israel, 2011) and most recently the Chaire Edmond de Rothschild (to work IBPC in Paris in 2017-2018). He has been Co-Editor in Chief of Journal of Phycology and has served on the editorial boards of many well-respected biological journals including the Annual Review of Genetics, Plant Physiology, Eukaryotic Cell, Journal of Biological Chemistry, Molecular Plant, and Current Genetics. He has also reviewed innumerable papers and grants, served on many scientific panels that has evaluated various programs for granting agencies [NSF, CNRS, Marden program (New Zealand)] and private companies. He has also served on scientific advisory boards for both nonprofit and for profit companies including Phoenix Bioinformatics, Excelixis, Martex, Solazyme/TerraVia, Checkerspot and Phycoil.

#### ACADEMIC APPOINTMENTS

- Professor (by Courtesy), Biology
- Visiting Professor (By courtesy), Biology

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### Research & Scholarship

#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

How photosynthetic organisms perceive and respond to their environment

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### Teaching

#### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (Phd Program)

## Publications

### PUBLICATIONS

- **Paulinella, a model for understanding plastid primary endosymbiosis.** *Journal of phycology*  
Gabr, A., Grossman, A. R., Bhattacharya, D.  
2020
- **Symbiont population control by host-symbiont metabolic interaction in Symbiodiniaceae-cnidarian associations.** *Nature communications*  
Xiang, T. n., Lehnert, E. n., Jinkerson, R. E., Clowe, S. n., Kim, R. G., DeNofrio, J. C., Pringle, J. R., Grossman, A. R.  
2020; 11 (1): 108
- **Photo-movement in the sea anemone *Aiptasia* influenced by light quality and symbiotic association** *CORAL REEFS*  
Foo, S. A., Liddell, L., Grossman, A., Caldeira, K.  
2019
- **Towards sustainable microalgal biomass processing: anaerobic induction of autolytic cell-wall self-ingestion in lipid-rich *Nannochloropsis* slurries** *GREEN CHEMISTRY*  
Halim, R., Hill, D. A., Hanssen, E., Webley, P. A., Blackburn, S., Grossman, A. R., Posten, C., Martin, G. O.  
2019; 21 (11): 2967–82
- **Proteomics quantifies protein expression changes in a model cnidarian colonised by a thermally tolerant but suboptimal symbiont.** *The ISME journal*  
Sproles, A. E., Oakley, C. A., Matthews, J. L., Peng, L., Owen, J. G., Grossman, A. R., Weis, V. M., Davy, S. K.  
2019
- **Alternative outlets for sustaining photosynthetic electron transport during dark-to-light transitions.** *Proceedings of the National Academy of Sciences of the United States of America*  
Saroussi, S., Karns, D. A., Thomas, D. C., Bloszies, C., Fiehn, O., Posewitz, M. C., Grossman, A. R.  
2019
- **Building the GreenCut2 suite of proteins to unmask photosynthetic function and regulation.** *Microbiology (Reading, England)*  
Grossman, A., Sanz-Luque, E., Yi, H., Yang, W.  
2019
- **A genome-wide algal mutant library and functional screen identifies genes required for eukaryotic photosynthesis** *NATURE GENETICS*  
Li, X., Patena, W., Fauser, F., Jinkerson, R. E., Saroussi, S., Meyer, M. T., Ivanova, N., Robertson, J. M., Yue, R., Zhang, R., Vilarrasa-Blasi, J., Wittkopp, T. M., Ramundo, et al  
2019; 51 (4): 627-+
- **A genome-wide algal mutant library and functional screen identifies genes required for eukaryotic photosynthesis.** *Nature genetics*  
Li, X., Patena, W., Fauser, F., Jinkerson, R. E., Saroussi, S., Meyer, M. T., Ivanova, N., Robertson, J. M., Yue, R., Zhang, R., Vilarrasa-Blasi, J., Wittkopp, T. M., Ramundo, et al  
2019
- **The mitochondrial alternative oxidase from *Chlamydomonas reinhardtii* enables survival in high light** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Kaye, Y., Huang, W., Clowe, S., Saroussi, S., Idoine, A., Sanz-Luque, E., Grossman, A. R.  
2019; 294 (4): 1380–95
- **Partner switching and metabolic flux in a model cnidarian-dinoflagellate symbiosis.** *Proceedings. Biological sciences*  
Matthews, J. L., Oakley, C. A., Lutz, A., Hillyer, K. E., Roessner, U., Grossman, A. R., Weis, V. M., Davy, S. K.  
2018; 285 (1892)
- **From molecular manipulation of domesticated *Chlamydomonas reinhardtii* to survival in nature.** *eLife*  
Sasso, S., Stibor, H., Mittag, M., Grossman, A. R.  
2018; 7
- **A giant type I polyketide synthase participates in zygospore maturation in *Chlamydomonas reinhardtii*** *PLANT JOURNAL*  
Heimerl, N., Hommel, E., Westermann, M., Meichsner, D., Lohr, M., Hertweck, C., Grossman, A. R., Mittag, M., Sasso, S.  
2018; 95 (2): 268–81

- **Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis** *MOLECULAR PHYLOGENETICS AND EVOLUTION*  
Sproles, A. E., Kirk, N. L., Kitchen, S. A., Oakley, C. A., Grossman, A. R., Weis, V. M., Davy, S. K.  
2018; 120: 307–20
- **Glucose-Induced Trophic Shift in an Endosymbiont Dinoflagellate with Physiological and Molecular Consequences** *PLANT PHYSIOLOGY*  
Xiang, T., Jinkerson, R. E., Clowez, S., Tran, C., Krediet, C. J., Onishi, M., Cleves, P. A., Pringle, J. R., Grossman, A. R.  
2018; 176 (2): 1793–1807
- **GreenCut protein CPLD49 of Chlamydomonas reinhardtii associates with thylakoid membranes and is required for cytochrome b6f complex accumulation.** *The Plant journal : for cell and molecular biology*  
Wittkopp, T. M., Saroussi, S. n., Yang, W. n., Johnson, X. n., Kim, R. G., Heinrickel, M. L., Russell, J. J., Phuthong, W. n., Dent, R. M., Broeckling, C. D., Peers, G. n., Lohr, M. n., Wollman, et al  
2018
- **Prolonged and highly efficient intracellular extraction of photosynthetic electrons from single algal cells by optimized nanoelectrode insertion** *NANO RESEARCH*  
Hong, H., Kim, Y., Han, M., Yoo, G., Song, H., Chae, Y., Pyun, J., Grossman, A. R., Ryu, W.  
2018; 11 (1): 397–409
- **Optimal nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis (vol 114, pg 13194, 2017)** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Matthews, J. L., Crowder, C., Oakley, C. A., Lutz, A., Roessner, U., Meyer, E., Grossman, A. R., Weis, V. M., Davy, S. K.  
2017; 114 (51): E11058
- **Optimal nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Matthews, J. L., Crowder, C. M., Oakley, C. A., Lutz, A., Roessner, U., Meyer, E., Grossman, A. R., Weis, V. M., Davy, S. K.  
2017; 114 (50): 13194–99
- **Flocculation of Chlamydomonas reinhardtii with Different Phenotypic Traits by Metal Cations and High pH** *FRONTIERS IN PLANT SCIENCE*  
Fan, J., Zheng, L., Bai, Y., Saroussi, S., Grossman, A. R.  
2017; 8
- **Biotic interactions as drivers of algal origin and evolution** *NEW PHYTOLOGIST*  
Brodie, J., Ball, S. G., Bouget, F., Chan, C., De Clerck, O., Cock, J., Gachon, C., Grossman, A. R., Mock, T., Raven, J. A., Saha, M., Smith, A. G., Vardi, et al  
2017; 216 (3): 670–81
- **Bilin-Dependent Photoacclimation in Chlamydomonas reinhardtii** *PLANT CELL*  
Wittkopp, T. M., Schmollinger, S., Saroussi, S., Hu, W., Zhang, W., Fan, Q., Gallaher, S. D., Leonard, M. T., Soubeyrand, E., Basset, G. J., Merchant, S. S., Grossman, A. R., Duanmu, et al  
2017; 29 (11): 2711–26
- **Insights into the red algae and eukaryotic evolution from the genome of Porphyra umbilicalis (Bangiophyceae, Rhodophyta)** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Brawley, S. H., Blouin, N. A., Ficko-Blean, E., Wheeler, G. L., Lohr, M., Goodson, H. V., Jenkins, J. W., Blaby-Haas, C. E., Helliwell, K. E., Chan, C., Marriage, T. N., Bhattacharya, D., Klein, et al  
2017; 114 (31): E6361–E6370
- **Thermal Shock Induces Host Proteostasis Disruption and Endoplasmic Reticulum Stress in the Model Symbiotic Cnidarian Aiptasia** *JOURNAL OF PROTEOME RESEARCH*  
Oakley, C. A., Durand, E., Wilkinson, S. P., Peng, L., Weis, V. M., Grossman, A. R., Davy, S. K.  
2017; 16 (6): 2121–34
- **A robust protocol for efficient generation, and genomic characterization of insertional mutants of Chlamydomonas reinhardtii** *PLANT METHODS*  
Pollock, S. V., Mukherjee, B., Bajsa-Hirschel, J., Machingura, M. C., Mukherjee, A., Grossman, A. R., Moroney, J. V.  
2017; 13
- **Impact of light intensity and quality on chromatophore and nuclear gene expression in Paulinella chromatophora, an amoeba with nascent photosynthetic organelles** *PLANT JOURNAL*  
Zhang, R., Nowack, E. C., Price, D. C., Bhattacharya, D., Grossman, A. R.  
2017; 90 (2): 221–234

- **Pyrenoid loss in *Chlamydomonas reinhardtii* causes limitations in CO<sub>2</sub> supply, but not thylakoid operating efficiency.** *Journal of experimental botany*  
Caspari, O. D., Meyer, M. T., Tolleter, D. n., Wittkopp, T. M., Cunniffe, N. J., Lawson, T. n., Grossman, A. R., Griffiths, H. n.  
2017; 68 (14): 3903–13
- **Nutrient scavenging and energy management: acclimation responses in nitrogen and sulfur deprived *Chlamydomonas*.** *Current opinion in plant biology*  
Saroussi, S. n., Sanz-Luque, E. n., Kim, R. G., Grossman, A. R.  
2017; 39: 114–22
- **Development of a toolbox to dissect host-endosymbiont interactions and protein trafficking in the trypanosomatid *Angomonas deanei*** *BMC EVOLUTIONARY BIOLOGY*  
Morales, J., Kokkori, S., Weidauer, D., Chapman, J., Goltsman, E., Rokhsar, D., Grossman, A. R., Nowack, E. C.  
2016; 16
- **Patterned Nanowire Electrode Array for Direct Extraction of Photosynthetic Electrons from Multiple Living Algal Cells** *ADVANCED FUNCTIONAL MATERIALS*  
Kim, L. H., Kim, Y. J., Hong, H., Yang, D., Han, M., Yoo, G., Song, H. W., Chae, Y., Pyun, J., Grossman, A. R., Ryu, W.  
2016; 26 (42): 7679-7689
- **Gene transfers from diverse bacteria compensate for reductive genome evolution in the chromatophore of *Paulinella chromatophora*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Nowack, E. C., Price, D. C., Bhattacharya, D., Singer, A., Melkonian, M., Grossman, A. R.  
2016; 113 (43): 12214-12219
- **Relative Contributions of Various Cellular Mechanisms to Loss of Algae during Cnidarian Bleaching** *PLOS ONE*  
Bieri, T., Onishi, M., Xiang, T., Grossman, A. R., Pringle, J. R.  
2016; 11 (4)
- **The Type II NADPH Dehydrogenase Facilitates Cyclic Electron Flow, Energy-Dependent Quenching, and Chlororespiratory Metabolism during Acclimation of *Chlamydomonas reinhardtii* to Nitrogen Deprivation** *PLANT PHYSIOLOGY*  
Saroussi, S. I., Wittkopp, T. M., Grossman, A. R.  
2016; 170 (4): 1975-1988
- **Genome Analysis of Planctomycetes Inhabiting Blades of the Red Alga *Porphyra umbilicalis*** *PLOS ONE*  
Kim, J. W., Brawley, S. H., Prochnik, S., Chovatia, M., Grimwood, J., Jenkins, J., LaButti, K., Mavromatis, K., Nolan, M., Zane, M., Schmutz, J., Stiller, J. W., Grossman, et al  
2016; 11 (3)
- **Tetratricopeptide repeat protein protects photosystem I from oxidative disruption during assembly** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Heinrickel, M., Kim, R. G., Wittkopp, T. M., Yang, W., Walters, K. A., Herbert, S. K., Grossman, A. R.  
2016; 113 (10): 2774-2779
- **Gordon research conference on the dynamics and regulation of photosynthesis: from the origin of bio-catalysis to innovative solar conversion.** *Photosynthesis research*  
Govindjee, Grossman, A. R., Bhaya, D.  
2016; 127 (3): 379-389
- **Critical role of *Chlamydomonas reinhardtii* ferredoxin-5 in maintaining membrane structure and dark metabolism.** *Proceedings of the National Academy of Sciences of the United States of America*  
Yang, W., Wittkopp, T. M., Li, X., Warakanont, J., Dubini, A., Catalanotti, C., Kim, R. G., Nowack, E. C., Mackinder, L. C., Aksoy, M., Page, M. D., D'Adamo, S., Saroussi, et al  
2015; 112 (48): 14978-14983
- **The Use of Contact Mode Atomic Force Microscopy in Aqueous Medium for Structural Analysis of Spinach Photosynthetic Complexes.** *Plant physiology*  
Phuthong, W., Huang, Z., Wittkopp, T. M., Sznee, K., Heinrickel, M. L., Dekker, J. P., Frese, R. N., Prinz, F. B., Grossman, A. R.  
2015; 169 (2): 1318-1332
- **Algae after dark: mechanisms to cope with anoxic/hypoxic conditions** *PLANT JOURNAL*  
Yang, W., Catalanotti, C., Wittkopp, T. M., Posewitz, M. C., Grossman, A. R.  
2015; 82 (3): 481-503

- **Symbiodinium transcriptome and global responses of cells to immediate changes in light intensity when grown under autotrophic or mixotrophic conditions** *PLANT JOURNAL*  
Xiang, T., Nelson, W., Rodriguez, J., Tolleter, D., Grossman, A. R.  
2015; 82 (1): 67-80
- **Profiling Chlamydomonas Metabolism under Dark, Anoxic H<sub>2</sub>-Producing Conditions Using a Combined Proteomic, Transcriptomic, and Metabolomic Approach** *JOURNAL OF PROTEOME RESEARCH*  
Subramanian, V., Dubini, A., Astling, D. P., Laurens, L. M., Old, W. M., Grossman, A. R., Posewitz, M. C., Seibert, M.  
2014; 13 (12): 5431-5451
- **Alternative Acetate Production Pathways in Chlamydomonas reinhardtii during Dark Anoxia and the Dominant Role of Chloroplasts in Fermentative Acetate Production.** *Plant cell*  
Yang, W., Catalanotti, C., D'Adamo, S., Wittkopp, T. M., Ingram-Smith, C. J., Mackinder, L., Miller, T. E., Heuberger, A. L., Peers, G., Smith, K. S., Jonikas, M. C., Grossman, A. R., Posewitz, et al  
2014; 26 (11): 4499-4518
- **Critical Function of a Chlamydomonas reinhardtii Putative Polyphosphate Polymerase Subunit during Nutrient Deprivation** *PLANT CELL*  
Aksoy, M., Pootakham, W., Grossman, A. R.  
2014; 26 (10): 4214-4229
- **The Chlamydomonas genome project: a decade on** *TRENDS IN PLANT SCIENCE*  
Blaby, I. K., Blaby-Haas, C. E., Tourasse, N., Hom, E. F., Lopez, D., Aksoy, M., Grossman, A., Umen, J., Dutcher, S., Porter, M., King, S., Witman, G. B., Stanke, et al  
2014; 19 (10): 672-680
- **16S AND 23S PLASTID RDNA PHYLOGENIES OF PROTOTHECA SPECIES AND THEIR AUXANOGRAPHIC PHENOTYPES** *JOURNAL OF PHYCOLOGY*  
Ewing, A., Brubaker, S., Somanchi, A., Yu, E., Rudenko, G., Reyes, N., Espina, K., Grossman, A., Franklin, S.  
2014; 50 (4): 765-769
- **Proton Gradient Regulation 5-Mediated Cyclic Electron Flow under ATP- or Redox-Limited Conditions: A Study of Delta ATPase pgr5 and Delta rbcL pgr5 Mutants in the Green Alga Chlamydomonas reinhardtii** *PLANT PHYSIOLOGY*  
Johnson, X., Steinbeck, J., Dent, R. M., Takahashi, H., Richaud, P., Ozawa, S., Houille-Vernes, L., Petroustos, D., Rappaport, F., Grossman, A. R., Niyogi, K. K., Hippler, M., Alric, et al  
2014; 165 (1): 438-452
- **Proton gradient regulation 5-mediated cyclic electron flow under ATP- or redox-limited conditions: a study of ?ATPase pgr5 and ?rbcL pgr5 mutants in the green alga Chlamydomonas reinhardtii.** *Plant physiology*  
Johnson, X., Steinbeck, J., Dent, R. M., Takahashi, H., Richaud, P., Ozawa, S., Houille-Vernes, L., Petroustos, D., Rappaport, F., Grossman, A. R., Niyogi, K. K., Hippler, M., Alric, et al  
2014; 165 (1): 438-452
- **Nitrogen-Sparing Mechanisms in Chlamydomonas Affect the Transcriptome, the Proteome, and Photosynthetic Metabolism** *PLANT CELL*  
Schmollinger, S., Muehlhaus, T., Boyle, N. R., Blaby, I. K., Casero, D., Mettler, T., Moseley, J. L., Kropat, J., Sommer, F., Strenkert, D., Hemme, D., Pellegrini, M., Grossman, et al  
2014; 26 (4): 1410-1435
- **The GreenCut: re-evaluation of physiological role of previously studied proteins and potential novel protein functions.** *Photosynthesis research*  
Heinrich, M. L., Grossman, A. R.  
2013; 116 (2-3): 427-436
- **The metabolic status drives acclimation of iron deficiency responses in Chlamydomonas reinhardtii as revealed by proteomics based hierarchical clustering and reverse genetics.** *Molecular & cellular proteomics*  
Höhner, R., Barth, J., Magneschi, L., Jaeger, D., Niehues, A., Bald, T., Grossman, A., Fufezan, C., Hippler, M.  
2013; 12 (10): 2774-2790
- **The Metabolic Status Drives Acclimation of Iron Deficiency Responses in Chlamydomonas reinhardtii as Revealed by Proteomics Based Hierarchical Clustering and Reverse Genetics** *MOLECULAR & CELLULAR PROTEOMICS*  
Hoehner, R., Barth, J., Magneschi, L., Jaeger, D., Niehues, A., Bald, T., Grossman, A., Fufezan, C., Hippler, M.  
2013; 12 (10): 2774-2790

- **Effect of Temperature on Photosynthesis and Growth in Marine *Synechococcus* spp.** *PLANT PHYSIOLOGY*  
Mackey, K. R., Paytan, A., Caldeira, K., Grossman, A. R., Moran, D., McIlvin, M., Saito, M. A.  
2013; 163 (2): 815-829
- **Coral bleaching independent of photosynthetic activity.** *Current biology*  
Tolleter, D., Seneca, F. O., DeNofrio, J. C., Krediet, C. J., Palumbi, S. R., Pringle, J. R., Grossman, A. R.  
2013; 23 (18): 1782-1786
- **Role of Polyphosphate in Thermophilic *Synechococcus* sp from Microbial Mats** *JOURNAL OF BACTERIOLOGY*  
Gomez-Garcia, M. R., Fazeli, F., Grote, A., Grossman, A. R., Bhaya, D.  
2013; 195 (15): 3309-3319
- **Isolation of clonal axenic strains of the symbiotic dinoflagellate *Symbiodinium* and their growth and host specificity** *JOURNAL OF PHYCOLOGY*  
Xiang, T., Hambleton, E. A., DeNofrio, J. C., Pringle, J. R., Grossman, A. R.  
2013; 49 (3): 447-458
- **Tiered Regulation of Sulfur Deprivation Responses in *Chlamydomonas reinhardtii* and Identification of an Associated Regulatory Factor** *PLANT PHYSIOLOGY*  
Aksoy, M., Pootakham, W., Pollock, S. V., Moseley, J. L., Gonzalez-Ballester, D., Grossman, A. R.  
2013; 162 (1): 195-211
- **Diversity and Abundance of the Bacterial Community of the Red Macroalga *Porphyra umbilicalis*: Did Bacterial Farmers Produce Macroalgae?** *PLOS ONE*  
Miranda, L. N., Hutchison, K., Grossman, A. R., Brawley, S. H.  
2013; 8 (3)
- **Novel Thylakoid Membrane GreenCut Protein CPLD38 Impacts Accumulation of the Cytochrome b(6)f Complex and Associated Regulatory Processes** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Heinrich, M. L., Alric, J., Wittkopp, T., Yang, W., Catalanotti, C., Dent, R., Niyogi, K. K., Wollman, F., Grossman, A. R.  
2013; 288 (10): 7024-7036
- **Retrograde bilin signaling enables *Chlamydomonas* greening and phototrophic survival** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Duanmu, D., Casero, D., Dent, R. M., Gallaher, S., Yang, W., Rockwell, N. C., Martin, S. S., Pellegrini, M., Niyogi, K. K., Merchant, S. S., Grossman, A. R., Lagarias, J. C.  
2013; 110 (9): 3621-3626
- **Fermentation metabolism and its evolution in algae.** *Frontiers in plant science*  
Catalanotti, C., Yang, W., Posewitz, M. C., Grossman, A. R.  
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- **Isolation of clonal axenic strains of the symbiotic dinoflagellate *Symbiodinium* and their growth and host specificity(1).** *Journal of phycology*  
Xiang, T. n., Hambleton, E. A., DeNofrio, J. C., Pringle, J. R., Grossman, A. R.  
2013; 49 (3): 447-58
- ***Porphyra* (Bangiophyceae) Transcriptomes Provide Insights Into Red Algal Development And Metabolism** *JOURNAL OF PHYCOLOGY*  
Chan, C. X., Blouin, N. A., Zhuang, Y., Zaeuner, S., Prochnik, S. E., Lindquist, E., Lin, S., Benning, C., Lohr, M., Yarish, C., Gantt, E., Grossman, A. R., Lu, et al  
2012; 48 (6): 1328-1342
- **A Flavin Binding Cryptochrome Photoreceptor Responds to Both Blue and Red Light in *Chlamydomonas reinhardtii*** *PLANT CELL*  
Beel, B., Prager, K., Spexard, M., Sasso, S., Weiss, D., Mueller, N., Heinrich, M., Dewez, D., Ikoma, D., Grossman, A. R., Kottke, T., Mittag, M.  
2012; 24 (7): 2992-3008
- **Three Acyltransferases and Nitrogen-responsive Regulator Are Implicated in Nitrogen Starvation-induced Triacylglycerol Accumulation in *Chlamydomonas*** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Boyle, N. R., Page, M. D., Liu, B., Blaby, I. K., Casero, D., Kropat, J., Cokus, S. J., Hong-Hermesdorf, A., Shaw, J., Karpowicz, S. J., Gallaher, S. D., Johnson, S., Benning, et al  
2012; 287 (19): 15811-15825
- **Trafficking of protein into the recently established photosynthetic organelles of *Paulinella chromatophora*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

Nowack, E. C., Grossman, A. R.

2012; 109 (14): 5340-5345

- **Analysis of Porphyrin Membrane Transporters Demonstrates Gene Transfer among Photosynthetic Eukaryotes and Numerous Sodium-Coupled Transport Systems** *PLANT PHYSIOLOGY*  
Chan, C. X., Zaeuner, S., Wheeler, G., Grossman, A. R., Prochnik, S. E., Blouin, N. A., Zhuang, Y., Benning, C., Berg, G. M., Yarish, C., Eriksen, R. L., Klein, A. S., Lin, et al  
2012; 158 (4): 2001-2012
- **A Mutant in the ADH1 Gene of Chlamydomonas reinhardtii Elicits Metabolic Restructuring during Anaerobiosis** *PLANT PHYSIOLOGY*  
Magneschi, L., Catalanotti, C., Subramanian, V., Dubini, A., Yang, W., Mus, F., Posewitz, M. C., Seibert, M., Perata, P., Grossman, A. R.  
2012; 158 (3): 1293-1305
- **Altered Fermentative Metabolism in Chlamydomonas reinhardtii Mutants Lacking Pyruvate Formate Lyase and Both Pyruvate Formate Lyase and Alcohol Dehydrogenase** *PLANT CELL*  
Catalanotti, C., Dubini, A., Subramanian, V., Yang, W., Magneschi, L., Mus, F., Seibert, M., Posewitz, M. C., Grossman, A. R.  
2012; 24 (2): 692-707
- **Genetic disruption of both Chlamydomonas reinhardtii [FeFe]-hydrogenases: Insight into the role of HYDA2 in H<sub>2</sub> production** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*  
Meuser, J. E., D'Adamo, S., Jinkerson, R. E., Mus, F., Yang, W., Ghirardi, M. L., Seibert, M., Grossman, A. R., Posewitz, M. C.  
2012; 417 (2): 704-709
- **Homomeric Interaction of the STAS Domain in Sultr1;2** *8th International Workshop on Sulfur Metabolism in Higher Plants*  
Shibagaki, N., Grossman, A. R.  
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