

研究業績目録 [Publication List on Research]

白岩 善博 [Yoshihiro SHIRAIWA]

2016年1月26日 [Jan. 26, 2016]

(1) 原著論文 (査読付) [Original Article with Referee]*: Corresponding author; *Open*: Open access.

1. Mori T †, Iwamoto K †, Wakaoji S, Araie H, Kohara Y, Okamura Y, Shiraiwa Y, and Takeyama H* (2016) Characterization of a novel gene involved in cadmium accumulation screened from sponge-associated bacterial metagenome. **Gene**, 576: 618-625. (Special Issue on *Marine Genomics*. Edited by T. Wada, S. Watabe, N. Okamoto, T. Gojobori and G. Bernardi) († Equal contribution). *Open*

2. Shi Q, Araie H, Bakku RK, Fukao Y, Rakwal R, Suzuki I and Shiraiwa Y* (2015) Proteomic analysis of lipid body from the alkenone-producing marine haptophyte alga, *Tisochrysis lutea*. **Proteomics**, 15 (23-24): 4145–4158. (Special Issue: *Proteomics in Marine Organisms*. Edited by T. Knigge). *Open*
3. Mizukawa Y, Miyashita Y, Satoh M, Shiraiwa Y and Iwasaka M* (2015) Potential of disk-shaped small structures, coccoliths, to promote efficient bioenergy production. **Scientific Reports** 5, Article number: 13577. doi:10.1038/srep13577. *Open*
4. Tsuji Y, Yamazaki M, Suzuki I and Shiraiwa Y* (2015) Quantitative analysis of carbon flow into photosynthetic products functioning as carbon storage in the marine coccolithophore, *Emiliana huxleyi*. **Marine Biotechnology**, 17: 428–440. DOI 10.1007/s10126-015-9632-1. *Open*
5. Nakamura H, Sawada K*, Araie H, Suzuki I and Shiraiwa Y (2015) *n*-Nonacosadienes from the marine haptophytes *Emiliana huxleyi* and *Gephyrocapsa oceanica*. **Phytochemistry** 111: 107-113. DOI information: <http://doi.10.1016/j.phytochem.2014.12.023>. PMID:25595675.

6. Kotajima T, Shiraiwa Y and Suzuki I* (2014) Functional screening of a novel $\Delta 15$ fatty acid desaturase from the coccolithophorid *Emiliana huxleyi*. **Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids**, 1841: 1451-1458, PMID: 25046625.
7. Komatsu H, Fujinuma D, Akutsu S, Fukayama D, Sorimachi Y, Kato Y, Kuroiwa Y, Watanabe T, Miyashita H, Iwamoto K, Shiraiwa Y, Ohnishi-Kameyama M, Ono H, Koike H, Sato Mayumi, Kawachi M and Kobayashi M (2014) Physicochemical properties of divinyl chlorophylls *a*, *a'* and divinyl pheophytin *a* compared with those of monovinyl derivatives. **Photomedicine and Photobiology** 36: 59-69.
8. Fukuda S, Suzuki Y and Shiraiwa Y* (2014) Difference in physiological responses of growth, photosynthesis and calcification of the coccolithophore *Emiliana huxleyi* to acidification by acid and CO₂. **Photosynthesis Research** 121: 299-309 (PMID:24500605)
9. Fukuda S, Iwamoto K, Atsumi M, Yokoyama A, Nakayama T, Ishida K, Inouye I and Shiraiwa Y* (2014) Global searches for microalgae and aquatic plants that can eliminate radioactive cesium, iodine and strontium from the radio-polluted aquatic environment: a bioremediation strategy. **Journal of Plant Research** 127: 79-89 (PMID:24346654). *Open*

10. Nakamura H, Sawada K*, Araie H, Suzuki I and Shiraiwa Y (2013) Long chain alkenes, alkenones and alkenoates produced by the haptophyte alga *Chrysolita lamellosa* CCMP1307 isolated from a salt marsh. **Organic Geochemistry** 66: 90-97. (DOI: 10.1016/j.orggeochem.2013.11.007)
11. Kotajima T, Shiraiwa Y and Suzuki I* (2013) Functional analysis of the N-terminal region of an essential

- histidine kinase, Hik2, in the cyanobacterium *Synechocystis* sp. PCC 6803. *FEMS Microbiology Letters*, 315: 88-94, PMID:24283389
12. Read BA*, Kegel J, Klute MJ, Kuo A, Lefebvre SC, Maumus F, Mayer C, Miller J, Monier A, Salamov A, Young J, Aguilar M, Claverie J-M, Frickenhaus S, Gonzalez K, Herman EK, Lin Y-C, Napier J, Ogata H, Sarno AF, Shmutz J, Schroeder D, de Vargas C, Verret F, von Dassow P, Valentin K, Van de Peer Y, Wheeler G, *Emiliana huxleyi* Annotation Consortium †, Dacks JB, Delwiche CF, Dyhrman ST, Glöckner G, John U, Richards T, Worden AZ, Zhang X and Grigoriev IV (2013) Pan genome of the phytoplankton *Emiliana* underpins its global distribution. *Nature* 499 (7457): 209-213. (doi:10.1038/nature12221, Published online 12 June 2013). **Open**

† *Emiliana huxleyi* Annotation Consortium: Allen AE, Bidle K, Borodovsky M, Bowler C, Brownlee C, J. Cock M, Elias M, Gladyshev VN, Groth M, Guda C, Hadaegh A, Iglesias-Rodriguez MD, Jenkins J, Jones BM, Lawson T, Leese F, Lindquist E, Lobanov A, Lomsadze A, Malik S-B, Marsh ME, Mackinder L, Mock T, Mueller-Roeber B, Pagarete A, Parker M, Probert I, Quesneville H, Raines C, Rensing SA, Riaño-Pachón DM, Richier S, Rokitta S, Shiraiwa Y, Soanes DM, van der Giezen M, Wahlund TM, Williams B, Wilson W, Wolfe G & Wurch LL.
 13. Ioki M†, Baba M†, Nakajima* N, Shiraiwa Y and Watanabe MM (2013) Codon usage of *Botryococcus braunii* (Trebouxiophyceae, Chlorophyta): implications for genetic engineering applications. *Phycologia* 52(4): 352-356. (Research note; †, equal contribution)
 14. Yamane K*, Matsuyama S, Igarashi K, Utsumi M, Shiraiwa Y and Kuwabara T (2013) Anaerobic coculture of microalgae with *Theriosipho globiformans* and *Methanocadococcus jannaschii* at 68°C enhances generation of n-alkene-rich biofuels after pyrolysis. *Applied and Environmental Microbiology* 79 (3): 924-930. doi: 10.1128/AEM.01685-12
 15. Kawahata C, M. Yamamuro M* and Shiraiwa Y (2013) Changes in alkaline band formation and calcification of corticated charophyte *Chara globularis*. *SpringerPlus* 2:85. doi:10.1186/2193-1801-2-85
-
16. Fujinuma*, D., S. Akutsu, H. Komatsu, T. Watanabe, H. Miyashita, K. Iwamoto, Y. Shiraiwa, M. R. Islam, H. Koike, M. Kawachi and M. Kobayashi* (2012) Detection of divinyl chlorophyll a' and divinyl pheophytin a as minor key components in a marine picoplankton *Prochlorococcus* sp. RCC315. *Photomedicine and Photobiology* 34: 47-52.
 17. Harada N*, Sato M, Oguri K, Hagino K, Okazaki Y, Katsuki K, Tsuji Y, Shin K-H, Tadai O, Saitoh S, Narita H, Konno S, Jordan RW, Shiraiwa Y and Grebmeier J (2012) Enhancement of coccolithophorid blooms in the Bering Sea by recent environmental changes. **GLOBAL BIOGEOCHEMICAL CYCLES**, VOL. 26, GB2036, 13 PP. doi:10.1029/2011GB004177.
 18. Ono M., Sawada K*, Shiraiwa Y and Kubota M (2012) Changes in alkenone and alkenoate distributions during acclimatization to salinity change in *Isochrysis galbana*: Implication for alkenone-based paleosalinity and paleothermometry. **GEOCHEMICAL JOURNAL** 46: 235-247. doi: 10.2343/geochemj.2.0203
 19. Shimura Y, Shiraiwa Y and Suzuki I* (2012) Characterization of the Subdomains in the Amino-terminal Region of Histidine Kinase Hik33 in the Cyanobacterium *Synechocystis* sp. PCC 6803. **Plant Cell Physiology** 53: 1255-1266.
 20. Tsuji Y, Suzuki I and Shiraiwa Y* (2012) Enzymological Evidence for the Function of a Plastid-located Pyruvate Carboxylase in the Haptophyte alga *Emiliana huxleyi*: a Novel Pathway for the Production of C₄ Compounds. **Plant Cell Physiol.** 53(6): 1043–1052. doi:10.1093/pcp/pcs045.
 21. Sakamoto K#, Baba M#, Suzuki I, Watanabe MM and Shiraiwa Y* (2012) Optimization of light for growth, photosynthesis, and hydrocarbon production by the colonial microalga *Botryococcus braunii* BOT-22. **Bioresource Technology** 110: 474-479. (#equal contributor)
 22. Iwamoto K, Fukuyo S, Okuda M, Kobayashi M and Shiraiwa Y* (2012) Cryopreservation of the chlorophyll *d*-containing cyanobacteria *Acaryochloris marina*. **Procedia Environmental Sciences** 15:

118–125.

23. Iwamoto K* and Shiraiwa Y (2012) Characterization of Intracellular Iodine Accumulation by Iodine-Tolerant Microalgae. **Procedia Environmental Sciences** 15: 34–42.
24. Ioki M#, Baba M#, Bidadi H, Suzuki I, Shiraiwa Y, Watanabe MM and Nakajima N* (2012) Modes of hydrocarbon oil biosynthesis revealed by comparative gene expression analysis for race A and race B strains of *Botryococcus braunii*. **Bioresource Technology**, 109:271-276. (#equal contributor)
25. Baba M, Kikuta F, Suzuki I, Watanabe MM and Shiraiwa Y* (2012) Wavelength specificity of growth, photosynthesis and hydrocarbon production in the oil-producing green alga *Botryococcus braunii*. **Bioresource Technology** 109:266-70.
26. Ioki M#, Baba M#, Nakajima N*, Shiraiwa Y and Watanabe MM (2012) Transcriptome analysis of an oil-rich race B strain of *Botryococcus braunii* (BOT-22) by *de novo* assembly of pyrosequencing cDNA reads. **Bioresource Technology** 109: 292-296. (#equal contributor)
27. Baba M# , Ioki M#, Nakajima N*, Shiraiwa Y and Watanabe MM (2012) Transcriptome analysis of an oil-rich race A strain of *Botryococcus braunii* (BOT-88-2) by *de novo* assembly of pyrosequencing cDNA reads. **Bioresource Technology** 109:282-286. (#equal contributor)
28. Ioki M#, Baba M#, Nakajima N, Shiraiwa Y and Watanabe MM (2012) Transcriptome analysis of an oil-rich Race B strain of *Botryococcus braunii* (BOT-70) by *de novo* assembly of 5'-end sequences of full-length cDNA clones. **Bioresource Technology** 109:277-281. (#Equal contribution)

29. Minami, S., M. Sato, Y. Shiraiwa and K. Iwamoto* (2011) Molecular Characterization of Adenosine 5'-monophosphate Deaminase—the Key Enzyme Responsible for the Umami Taste of Nori (*Porphyra yezoensis* Ueda, Rhodophyta). **Marine Biotechnology** 13(6): 1140-1147.
30. Hackenberg, C., R. Kern, J. Hüge, L. J. Stal, Y. Tsuji, J. Kopka, Y. Shiraiwa, H. Bauwe and M. Hagemann* (2011) Cyanobacterial lactate oxidases serve as essential partners of N₂-fixation and evolved to photorespiratory glycolate oxidases in plants. **Plant Cell** 23(8): 2978-2990.
31. Baba, M., I. Suzuki and Y. Shiraiwa* (2011) Proteomic Analysis of High-CO₂-Inducible Extracellular Proteins in the Unicellular Green Alga, *Chlamydomonas reinhardtii*. **Plant Cell Physiology** 52(8): 1302-1314.
32. Araie, H., K. Sakamoto, I. Suzuki and Y. Shiraiwa* (2011) Characterization of the Selenite Uptake Mechanism in the Coccolithophore *Emiliana huxleyi* (Haptophyta). **Plant Cell Physiology** 52: 1204-1210.
33. Sakiyama, T., H. Araie, I. Suzuki and Y. Shiraiwa* (2011) Functions of hemolysin-like protein in the cyanobacterium *Synechocystis* sp. PCC6803. **Archives of Microbiology** 193:565–571.
34. Fukuda, S., I. Suzuki, T. Hama and Y. Shiraiwa* (2011) Compensatory Response of the Unicellular-Calcifying Alga *Emiliana huxleyi* (Coccolithophorales, Haptophyta) to Ocean Acidification. **Journal of Oceanography** 67: 17-25.
35. Baba, M., Y. Hanawa, I. Suzuki, Y. Shiraiwa (2011) Regulation of the Expression of H43/Fea1 by Multi-Signals. **Photosynthesis Research** 109 (1-3 SI): 169-177.
36. Kayano, K., K. Saruwatari, T. Kogure and Y. Shiraiwa* (2011) Effect of Coccolith Polysaccharides Isolated from the Coccolithophorid, *Emiliana huxleyi*, on calcite crystal formation in *in vitro* CaCO₃ Crystallization. **Marine Biotechnology** 13: 83-92.

37. Ra*, K., H. Kitagawa and Y. Shiraiwa (2010) Mg isotopes in chlorophyll-*a* and coccoliths of cultured coccolithophores (*Emiliana huxleyi*) by MC-ICP-MS. **Marine Chemistry** 122: 130–137.

38. Ra*, K., H. Kitagawa and Y. Shiraiwa (2010) Mg isotopes and Mg/Ca values of coccoliths from cultured specimens of the species *Emiliana huxleyi* and *Gephyrocapsa oceanica*. **Marine Micropaleontology** 77: 119–124.
39. Tsuji, Y., I. Suzuki and Y. Shiraiwa* (2009) Photosynthetic Carbon Assimilation in the Coccolithophorid *Emiliana huxleyi* (Haptophyta): Evidence for the Contribution of β -Carboxylation Enzymes. **Plant Cell Physiology** 50 (2): 318-329.
40. Kimura, S., Y. Shiraiwa and I. Suzuki* (2009) Function of the N-terminal region of the phosphate-sensing histidine kinase, SphS, in *Synechocystis* sp. PCC 6803. **Microbiology** 155: 2256-2264.
41. Kayano, K. and Y. Shiraiwa* (2009) Physiological Regulation of Coccolith Polysaccharide Production by Phosphate Availability in the Coccolithophorid *Emiliana huxleyi*. **Plant Cell Physiology** 50: 1522-1531.
42. Satoh, M., K. Iwamoto, I. Suzuki and Y. Shiraiwa* (2009) Cold Stress Stimulates Intracellular Calcification by the Coccolithophore, *Emiliana huxleyi* (Haptophyceae) Under Phosphate-Deficient Conditions. **Marine Biotechnology** 11: 327-333.
43. Sakayori, T., Y. Shiraiwa and I. Suzuki* (2009) A Homolog of SipA Protein, Ssl3451, in *Synechocystis* Enhances the Activity of the Histidine Kinase Hik33. **Plant Cell Physiology** 50: 1439-1448. IF=3.542
44. Ono, M., K. Sawada*, M. Kubota and Y. Shiraiwa (2009) Change of the unsaturation degree of alkenone and alkenoate during acclimation to salinity change in *Emiliana huxleyi* and *Gephyrocapsa oceanica* with reference to palaeosalinity indicator. **Research in Organic Geochemistry** 25: 53-60.
45. Okazaki, M, K. Higuchi, Y. Hanawa, Y. Shiraiwa and H. Ezura (2009) Cloning and characterization of a *Chlamydomonas reinhardtii* cDNA arylalkylamine N-acetyltransferase and its use in the genetic engineering of melatonin content in the Micro-Tom tomato. **Journal of Pineal Research** 46: 373-382.
46. Araie, H., I. Suzuki, and Y. Shiraiwa* (2008) Identification and characterization of a selenoprotein, thioredoxin reductase, in a unicellular marine haptophyte alga, *Emiliana huxleyi*. **Journal of Biological Chemistry** 283 (51): 35329-35336.
47. Hanawa, Y., M. Watanabe, Y. Karatsu, H. Fukuzawa and Y. Shiraiwa* (2007) Induction of a high-CO₂ inducible, periplasmic protein, H43, and its application as a high-CO₂ responsive marker for study on high-CO₂ sensing mechanism in *Chlamydomonas reinhardtii*. **Plant Cell Physiology** 48 (2) : 299-309.
48. Kobayashi, M.*, S. Ohashi, K. Iwamoto, Y. Shiraiwa, Y. Kato and T. Watanabe (2007) Redox potential of chlorophyll *d in vitro*. **Biochimica et Biophysica Acta** 1767 (6): 596-602.
49. Zhang, X., X. Zhang*, Y. Shiraiwa, Z. Sui and Y. Mao (2005) Cloning and Characterization of *hoxH* Gene from *Arthrospira* and *Spirulina* and its Application in Phylogenetic Study. **Marine Biotechnology** 7: 287-296.
50. Zhang, X., Z. Sui, Y. Shiraiwa, K. Iwamoto and X. Zhang* (2005) Cloning and analysis of [NiFe]-hydrogenase genes from *Arthrospira platensis* SACHB341. **High Technology Letters** 11 (4): 421-426. (China Academic Journal Electronic Publishing House. <http://www.cnki.net>)
51. Obata, T.* and Y. Shiraiwa (2005) A novel selenoprotein in the haptophyte alga *Emiliana huxleyi*. **Journal of Biological Chemistry** 280: 18462-18468.
52. Koizumi, H, Y. Itoh, S. Hosoda, M. Akiyama, T. Hoshino, Y. Shiraiwa and M. Kobayashi (2005) Serendipitous discovery of Chl *d* formation from Chl *a* with papain. **Science and Technology of Advanced Materials (STAM)** 6: 551-557.
53. Kobayashi, M.*, S. Watanabe, T. Gotoh, H. Koizumi, Y. Itoh, M. Akiyama, Y. Shiraiwa, T. Tsuchiya, H. Miyashita, M. Mimuro, T. Yamashita and T. Watanabe (2005) Minor but key chlorophylls in Photosystem II. **Photosynthesis Research** 84 (SI): 201-207.

54. Iwamoto, K. and Y. Shiraiwa* (2005) Technical improvement in the purification of enzymes from red algae using an aqueous two-phase partitioning system. **Phycological Research** 53: 164-168. (With Cover Photo)
55. Sorrosa, J.M., M. Sato and Y. Shiraiwa* (2005) Low temperature stimulates cell enlargement and intracellular calcification of coccolithophorids. **Marine Biotechnology** 7: 128-133.
56. Obata, T., H. Araie and Y. Shiraiwa* (2004) Bioconcentration mechanism of selenium by a coccolithophorid, *Emiliana huxleyi*. **Plant Cell Physiology** 45(10): 1434-1441.
57. Sawada, K. and Y. Shiraiwa* (2004) Alkenone and alkenoic acid compositions of the membrane fractions of *Emiliana huxleyi*. **Phytochemistry** 65: 1299-1304.
58. Obata, T., K. Sera, S. Futatsugawa and Y. Shiraiwa* (2004) Multi-element analysis of marine microalgae using particle-induced X-ray emission (PIXE). **Marine Biotechnology** 6: S66-S70.
59. Shiraiwa, Y.*, A. Danbara and Y. Kanke (2004) Characterization of highly oxygen-sensitive photosynthesis in coccolithophorids. **Japanese Journal of Phycology** 52 (Supplement): 87-94.
60. Hanawa, Y., K. Iwamoto, Y. Shiraiwa* (2004) Purification of a recombinant high-CO₂-inducible protein of *Chlamydomonas reinhardtii* expressed in *Escherichia coli*. **Japanese Journal of Phycology** 52 (Supplement):95-100.
61. Iwamoto, K., H. Kawanobe, T. Ikawa and Y. Shiraiwa* (2004) Regulatory mechanism of mannitol biosynthesis in the red alga *Caloglossa continua* (Ceramiales, Rhodophyta). **Japanese Journal of Phycology** 52 (Supplement): 101-105.
62. Iwamoto, K. and Y. Shiraiwa* (2003) Characterization of NADH:nitrate reductase from the coccolithophorid, *Emiliana huxleyi* (Lohman) Hay & Mohler (Haptophyceae). **Marine Biotechnology** 5: 20-26.
63. Iwamoto, K., H. Kawanobe, T. Ikawa and Y. Shiraiwa* (2003) Characterization of salt-regulated mannitol-1-phosphate dehydrogenase in the red alga *Caloglossa continua*. **Plant Physiology** 133: 893-900.
64. Iwamoto, K.*, H. Kawanobe, Y. Shiraiwa and T. Ikawa (2001) Purification and characterization of mannitol-1-phosphatase in the red alga, *Caloglossa continua* (Ceramiales, Rhodophyta). **Marine Biotechnology** 3: 493-500.
65. Sawada, K., H. Okada, Y. Shiraiwa and N. Handa (2000) Productivity of Gephyrocapsacean algae revealed from long-chain alkenones and alkyl alkenoate in the northwestern Pacific off Japan. *In: Dynamics and Characterization of marine organic matter*. Edited by N. Handa, E. Tanoue and T. Hama. pp. 187-212. Terra Pub./Kluwer, Tokyo/Dordrecht, pp. 187-211. (Peer-reviewed original article)
66. Yamamoto, M.*, Y. Shiraiwa and I. Inouye (2000) Physiological responses of lipids in *Emiliana huxleyi* and *Gephyrocapsa oceanica* (Haptophyceae) to growth status and their implications for alkenone paleothermometry. **Organic Geochemistry** 31: 799-811.
67. Danbara, A. and Y. Shiraiwa* (1999) The requirement of selenium for the growth of marine coccolithophorids, *Emiliana huxleyi*, *Gephyrocapsa oceanica* and *Helladosphaera* sp. (Prymnesiophyceae). **Plant Cell Physiology** 40: 762-766.
68. Wu, Q.*, Y. Shiraiwa, H. Takeda, G. Sheng and J. Fu (1999) Liquid-saturated hydrocarbons resulting from pyrolysis of the marine coccolithophores *Emiliana huxleyi* and *Gephyrocapsa oceanica*. **Marine Biotechnology** 1: 346-352.
69. Wu, Q.*, Dai, J., Y. Shiraiwa, Sheng, G. and J. Fu (1999) A renewable energy source-hydrocarbon gasses resulting from pyrolysis of the marine nanoplanktonic alga *Emiliana huxleyi*. **Journal of Applied Phycology** 11: 137-142.

70. Wu, Q.* and Y. Shiraiwa (1999) Effects of HCO_3^- on surface calcification and CO_2 fixation in marine *Emiliania huxleyi*. **Acta Botanica Sinica** 41(3): 285-289 (in Chinese).
71. Wu Q*, R. Wang, J. Dai, Y. Song and Y. Shiraiwa (1999) Hydrocarbons pyrolysed from nannoplanktonic algae: An experimental organism system for study on the origin of petroleum and natural gas. **Chinese Science Bulletin** 44 (8): 767-768.
72. 檀原明子, 白岩善博* (1999) : 円石藻 *Emiliania huxleyi* のセレン要求性と生育培地の選択. 日本海水学会誌 53 巻 6 号, 476-484.
73. Satoh, A., T. Iwasaki, S. Odani and Y. Shiraiwa* (1998) Purification, characterization and cDNA cloning of soluble carbonic anhydrase from *Chlorella sorokiniana* grown under ordinary air. **Planta** 206: 657-665.
74. Sasaki, T., R. K. Togasaki and Y. Shiraiwa* (1997) Carbonic anhydrase is induced prior to arylsulfatase under the simultaneous deprivation of inorganic carbon and sulfate in *Chlamydomonas reinhardtii*. **Phycological Research** 45: 207-211.
75. Satoh, A. and Y. Shiraiwa* (1996) Two polypeptides inducible by low levels of CO_2 in soluble protein fractions from *Chlorella regularis* grown at low or high pH. **Plant Cell Physiology** 37: 431-437.
76. Sawada, K.*, N. Handa, Y. Shiraiwa, A. Danbara and S. Montani (1996) Long-chain alkenones and alkyl alkenoates in the coastal and pelagic sediments of the northwest North Pacific, with special reference to the reconstruction of *Emiliania huxleyi* and *Gephyrocapsa oceanica* ratios. **Organic Geochemistry** 24: 751-764.
77. Sekino, K., H. Kobayashi and Y. Shiraiwa* (1996) Role of coccoliths in the utilization of inorganic carbon by a marine unicellular coccolithophorid, *Emiliania huxleyi*: a survey using intact cells and protoplasts. **Plant Cell Physiology** 37: 123-127.
78. Sekino, K. and Y. Shiraiwa* (1996) Evidence for the involvement of mitochondrial respiration in calcification in a marine coccolithophorid, *Emiliania huxleyi*. **Plant Cell Physiology** 37: 1030-1033.
79. Sekino, K. and Y. Shiraiwa* (1995) CO_2 release during photosynthesis and respiration from the culture of calcifying and non-calcifying marine unicellular algae. **Journal of Marine Biotechnology** 3: 101-104.
80. Ramazanov, Z.*, Y. Shiraiwa, M. Jimenez del Rio and J. Rubio (1995) Effect of external CO_2 concentrations on protein synthesis in the green algae *Scenedesmus obliquus* (Turp.) Kütz and *Chlorella vulgaris* (Kosikov). **Planta** 197: 272 - 277.
81. 沢田健*, 半田暢彦, 白岩善博, 檀原明子 (1995) 堆積物中の長鎖アルケノン, アルケノエイトによる円石藻群集組成の復元の試み: 培養実験からのアプローチ. **Res. Org. Geochem.** 10: 21-26.
82. Müller, C., M. Tsuzuki, Y. Shiraiwa and H. Senger* (1994) Carbon affinity adaptation of *Synechococcus* and its phycocyanin mutant to various CO_2 concentration and light intensities. **Journal of Photochemistry & Photobiology B: Biology** 26: 97-101.
83. Sekino, K. and Y. Shiraiwa* (1994) Accumulation and utilization of dissolved inorganic carbon by a marine unicellular coccolithophorid, *Emiliania huxleyi*. **Plant Cell Physiology** 35: 353-361.
84. Shiraiwa, Y.*, A. Goyal and N.E. Tolbert (1993) Alkalization of the medium by unicellular green algae during uptake of dissolved inorganic carbon. **Plant Cell Physiology** 34: 649-657.
85. Goyal, A., Y. Shiraiwa, H.D. Husic and N.E. Tolbert* (1992) External and internal carbonic anhydrases in *Dunaliella* species. **Marine Biology** 113: 349-355.
86. Goyal, A., Y. Shiraiwa and N.E. Tolbert* (1992) Carbon oxysulfide inhibition of the CO_2 -concentrating process of unicellular green algae. **Plant Physiology** 98: 578-583.

87. Shiraiwa, Y.* and Y. Umino (1991) Effect of glucose on the induction of the carbonic anhydrases and the change in $K_{1/2}(\text{CO}_2)$ of photosynthesis in *Chlorella vulgaris* 11h. **Plant Cell Physiology** 32: 311-314.
88. Shiraiwa, Y.*, S. Yokoyama and A. Satoh (1991) pH-dependent regulation of carbonic anhydrase induction and changes in photosynthesis during adaptation of *Chlorella* cells to low CO_2 . **Japanese Journal of Phycology** 39: 355-362.
89. Umino, Y. and Y. Shiraiwa* (1991) Effect of metabolites on carbonic anhydrase induction in *Chlorella regularis*. **Journal of Plant Physiology** 139: 41-44.
90. Umino, Y., A. Satoh and Y. Shiraiwa* (1991) Factors controlling induction of external carbonic anhydrase and change in $K_{1/2}(\text{CO}_2)$ of photosynthesis in *Chlorella regularis*. **Plant Cell Physiology** 32: 379-384.
91. Nara, M., Y. Shiraiwa and T. Hirokawa* (1990) Enzymatic inactivation of extracellular carbonic anhydrase and its effect on $K_{1/2}(\text{CO}_2)$ for photosynthesis in *Chlorella ellipsoidea* C-27. **Plant Cell Physiol.** 31: 961-967.
92. Nara, M., Y. Shiraiwa and T. Hirokawa* (1989) Changes in the carbonic anhydrase activity and the rate of photosynthetic O_2 evolution during the cell cycle of *Chlorella ellipsoidea* C-27. **Plant Cell Physiology** 30: 267-275.
93. Shiraiwa, Y.* and M. Kikuyama (1989) Role of carbonic anhydrase and identification of the active species of inorganic carbon utilized for photosynthesis in *Chara corallina*. **Plant Cell Physiology** 30: 581-587.
94. Shiraiwa, Y.*, H. Satoh, T. Hirokawa (1988) Factors controlling induction of carbonic anhydrase in *Chlorella vulgaris* 11h: Effects of CO_2 and O_2 . **Plant Cell Physiology** 29: 731-734.
95. Shiraiwa, Y., K.P. Bader and G.H. Schmid* (1988) Mass spectrometric analysis of oxygen gas exchange in high- and low- CO_2 cells of *Chlorella vulgaris*. **Zeitschrift für Naturforschung** 43c: 709-716.
96. Shiraiwa, Y. and G.H. Schmid* (1987) Effect of pH on glycolate and ammonia excretion in L-MSO treated *Chlorella* cells. **Zeitschrift für Naturforschung** 42c: 525-529.
97. Shiraiwa, Y. and G.H. Schmid* (1986) Stimulation of photorespiration by the carbonic anhydrase inhibitor ethoxazolamide in *Chlorella vulgaris*. **Zeitschrift für Naturforschung** 41c: 564-570.
98. Shiraiwa, Y. and G.H. Schmid* (1986) Effect of the CO_2 -concentration during growth on the oxygen evolution pattern under flash light in *Chlorella*. **Zeitschrift für Naturforschung** 41c: 269-274.
99. Shiraiwa, Y.* and S. Miyachi (1985) Effects of temperature and CO_2 concentration on induction of carbonic anhydrase and changes in efficiency of photosynthesis in *Chlorella vulgaris* 11h. **Plant Cell Physiology** 26: 543-549.
100. Shiraiwa, Y.* and S. Miyachi (1985) Role of carbonic anhydrase in photosynthesis of blue-green alga (Cyanobacterium) *Anabaena variabilis* ATCC29413. **Plant Cell Physiology** 26: 109-116.
101. Yagawa, Y., Y. Shiraiwa* and S. Miyachi (1984) Carbonic anhydrase from the blue-green alga (Cyanobacterium) *Anabaena variabilis*. **Plant Cell Physiology** 25: 775-783.
102. Shiraiwa, Y. and S. Miyachi* (1983) Factors controlling induction of carbonic anhydrase and efficiency of photosynthesis in *Chlorella vulgaris* 11h cells. **Plant Cell Physiology** 24: 919-923.
103. Imamura, M., M. Tsuzuki, Y. Shiraiwa and S. Miyachi* (1983) Form of inorganic carbon utilized for photosynthesis in *Chlamydomonas reinhardtii*. **Plant Cell Physiology** 24: 533-540.
104. Tsuzuki, M., Y. Shiraiwa and S. Miyachi* (1980) Role of carbonic anhydrase in photosynthesis in *Chlorella* derived from kinetic analysis of $^{14}\text{CO}_2$ fixation. **Plant Cell Physiology** 21: 677-688.

105. Miyachi, S.* and Y. Shiraiwa (1979) Form of inorganic carbon for photosynthesis in *Chlorella vulgaris* 11h cells. **Plant Cell Physiology** 20: 341-348.
106. Shiraiwa, Y. and S. Miyachi* (1979) Enhancement of ribulose 1,5-bisphosphate carboxylation reaction by carbonic anhydrase. **FEBS Letters** 106: 243-246.
107. Shiraiwa, Y. and S. Miyachi* (1978) Form of inorganic carbon utilized for photosynthesis across the chloroplast membrane. **FEBS Letters** 95: 207-210.
108. Shiraiwa, Y., K. Abe, S.-F. Sasaki, T. Ikawa and K. Nisizawa* (1975) Alginate lyase activities in the extracts of several brown algae. **Botanica Marina (Berlin)** 18: 97-104.

(2) 原著論文 (国際会議 Proceedings) [Original Articles published in the Proceedings of International Conferences]

1. Akutsu, S, H. Komatsu, D. Fujinuma, H. Miyashita, K. Iwamoto, Y. Shiraiwa and M. Kobayashi* (2013) Chlorophyll *d* production in crushed algae in aqueous acetone. **Photomed. Photobiol.** 35: 39-42.
2. Minami, S.* , M. Sato, Y. Shiraiwa, K. Iwamoto (2008) Cloning of 5'-AMP deaminase, the main factor for synthesizing Umami taste of Nori, and its application for the evaluation of Umami taste. Proc. of 5th World Fisheries Congress, Yokohama, Oct. 20-25.
3. Shiraiwa, Y.*, M. Kubota, JM Sorrosa and P von Wettstein-Knowles (2005) Alkenone synthesis in *Emiliana huxleyi* probed with radiolabeled substrate and a fatty acid synthesis inhibitor. In: Recent Advances in Marine Science and Technology, 2004. Edited by N. Saxena. pp. 27-36. PACON International, Hawaii, ISBN 0-9634343-6-5. (Peer-reviewed)
4. Sorrosa, J. M., M. Yamamoto and Y. Shiraiwa* (2003) Nonthermal factors affecting production and unsaturation of alkenones in *Emiliana huxleyi* and *Gephyrocapsa oceanica*. In: Murata N. et al. (eds.), Advanced Researches on Plant Lipids. pp. 133-136. Kluwer Academic Publishers, Dordrecht, The Netherlands.
5. Shiraiwa, Y.*, Y. Hatano-Sugimoto and M. Satoh (2003) Regulation of intracellular calcification and algal growth by nutrient supply in coccolithophorids. In: Kobayashi, I. & Ozawa, H. (eds). Biomineralization: formation, diversity, evolution and application, Tokai University press, Tokyo, pp. 241-246.
6. Satoh, A. and Y. Shiraiwa* (1992) Characterization of active transport of CO₂ during photosynthesis in *Chlorella regularis*. In: Research in Photosynthesis Vol. III. Edited by N. Murata, pp.779-782. Kluwer Academic Publishers (Dordrecht, The Netherlands).
7. Shiraiwa, Y., J. Fakler and S. Miyachi* (1981) Factors controlling carbonic anhydrase activity in *Chlorella vulgaris* 11h. In: Photosynthesis IV. Regulation of Carbon Metabolism. Edited by G. Akoyunoglou, pp. 493-499. Balaban International Science Services, Philadelphia, Pa.

(3) 欧文総説・著書 (査読付を含む) [Review Articles published in Journals and Books]

1. Tsuji Y* and Shiraiwa Y (2015) Distinctive features of photosynthetic carbon metabolism in secondary endosymbiotic algae. **Perspectives in Phycology**, in press. ISSN 2198-011X (online) (Peer-reviewed article) Publication on line: Jun 12, 2015, DOI: 10.1127/pip/2015/0029 (Schweizerwald)
2. Araie H* and Shiraiwa Y (2015) Selenium in algae; **The Physiology of Microalgae**; M.A. Borowitzka, J. Beardall and J.A. Raven, Eds.; Springer-Verlag: Heidelberg, Germany, in press. (**Book Chapter**) (Peer-reviewed article)
3. Ndimba BK, Ndimba RJ, Johnson TS, Waditee-Sirisattha R, Baba M, Sirisattha S, Shiraiwa Y, Agrawal GK, Rakwal R* (2013) Biofuels as a sustainable energy source: an update of the applications of

- proteomics in bioenergy crops and algae. **Journal of Proteomics**, 93: 234-44 (PMID:23792822) (Review) (Peer-reviewed article)
4. Baba M and Shiraiwa Y* (2013) Biosynthesis of Lipids and Hydrocarbons in Algae. In **PHOTOSYNTHESIS**. Edited by Zvy Dubinsky. InTech Pub., Rijeka, Croatia. ISBN 980-953-307-838-5. (Peer-reviewed article)
 5. Baba M and Shiraiwa Y* (2012) High-CO₂ response mechanisms in microalgae. *In: Advances in Photosynthesis - Fundamental Aspects*. Edited by Mohammad Najafpour. InTech Pub., Rijeka, Croatia. ISBN: 978-953-307-928-8. Available on-line from: <http://www.intechopen.com/books/advances-in-photosynthesis-fundamental-aspects/high-co2-response-mechanism-in-microalgae>. (Peer-reviewed)
 6. Araie H and Shiraiwa Y* (2009) Selenium Utilization Strategy by Microalgae (Review). **Molecule** 14: 4880-4891 (The special issue on "Selenium and Tellurium Chemistry"). Available on-line from: <http://www.mdpi.com/1420-3049/14/12/4880>. (Peer-reviewed),
 7. Iwamoto K and Shiraiwa Y* (2005) Salt-Regulated Mannitol Metabolism in Algae. **Marine Biotechnol.** 7: 407-415 (2005). (Peer-reviewed)
 8. Shiraiwa Y* (2003) Physiological regulation of carbon fixation in the photosynthesis and calcification of coccolithophorids. **Comp. Biochem. Physiol. Part B** 136: 775-783 (Peer-reviewed).
 9. Miyachi S, Iwasaki I and Shiraiwa Y* (2003) Historical perspective on microalgal and cyanobacterial acclimation to low- and extremely high-CO₂ conditions. **Photosynth. Res.** 77 (2/3): 139-153. (Peer-reviewed).
 10. Shiraiwa Y* (2002) Marine photosynthesis and global environment: Role of coccolithophorids. **Photomedicine and Photobiology** 23: 35-37.
 11. Suzuki E, Shiraiwa Y and Miyachi S* (1994) The cellular and molecular aspects of carbonic anhydrase in photosynthetic microorganisms. In: **Progress in Phycological Research**. Vol. 10, Edited by F.E. Round and D.J. Chapman. pp. 1-54. Biopress Ltd., Bristol, England. (Invited review article).

(4) 和文著書・訳書 [Japanese Review Articles published in Journals, Scientific Magazines and Books]

1. 岩本浩二、新家弘也、竹山春子、白岩善博：マリンメタゲノムライブラリーからの元素濃縮遺伝子の探索. 小西康裕（監修）：バイオベース資源確保戦略—都市鉱山・海底鉱山に眠る貴金属・レアメタル等の分離・回収技術—、第IV編、第2章、pp. 257–266、シーエムシー出版、東京、2015年7月（分担）。ISBN 978-4-7813-1075-6 (C3045).
2. 岩本浩二、白岩善博：放射性セシウム、ストロンチウム、ヨウ素の濃縮・回収能を有する微細藻類株の探索. 小西康裕（監修）：バイオベース資源確保戦略—都市鉱山・海底鉱山に眠る貴金属・レアメタル等の分離・回収技術—、第IV編、第3章、pp. 267–277、シーエムシー出版、東京、2015年7月（分担）。ISBN 978-4-7813-1075-6 (C3045).
3. 岩本浩二、白岩善博：放射性セシウム、ストロンチウムおよびヨウ素の除去に貢献する「藻」について（第18節）. 放射性物質の吸着・除染および耐放射線技術における材料・施工・測定の新技術、pp. 633、(株)技術情報協会、東京・品川、2014年11月28日.
4. 福田真也、岩本浩二、熱海美香、横山亜紀子、中山剛、石田健一郎、井上勲、白岩善博*：放射能汚染水から放射性セシウム、ヨウ素およびストロンチウムを除去する能力が高い微細藻類と水生植物の探索: バイオレメディエーション戦略に向けて、*Journal of Plant Research* 127 巻1号 (2014年発行) JPR Symposium "Current status and future control of cesium contamination in plants and algae in Fukushima" 日本語抄訳集。
5. 辻 敬典、白岩善博：炭素同化と初期代謝. 渡邊信（監修） 渡邊・白岩他（編集）：藻類ハンド

- ブック、NTS、東京、第1編/第2章/第1節/第2項、p. 160-165、**2012**年。
6. 岩本浩二、白岩善博：グリセロール、マンニトール代謝。渡邊信（監修）渡邊・白岩他（編集）：**藻類ハンドブック**、NTS、東京、第1編/第2章/第1節/第6項、p. 178-182、**2012**年。
 7. 新家弘也、白岩善博：セレノプロテイン。渡邊信（監修）渡邊・白岩他（編集）：**藻類ハンドブック**、NTS、東京、第1編/第2章/第1節/第8項、p. 186-190、**2012**年。
 8. 佐藤真奈美、白岩善博：バイオミネラル藻類のバイオミネラルリゼーション機構。渡邊信（監修）渡邊・白岩他（編集）：**藻類ハンドブック**、NTS、東京、第1編/第2章/第1節/第13項、p. 212-217、**2012**年。
 9. 佐藤真奈美、白岩善博：シャジクモ目藻類の衰退。渡邊信（監修）渡邊・白岩他（編集）：**藻類ハンドブック**、NTS、東京、第2編/第2章/第2節/第2項、p. 376-379、**2012**年。
 10. 岩本浩二、白岩善博：カラゲナン。渡邊信（監修）渡邊・白岩他（編集）：**藻類ハンドブック**、NTS、東京、第2編/第2章/第1節/第6項、p. 749-753、**2012**年。
 11. 猪川倫好他（白岩善博）：三省堂新生物小事典。猪川倫好（監修）、三省堂編集所（編）、pp.664、三省堂、東京、**2012**年5月。（項目分担執筆）
 12. 馬場将人、白岩善博：藻類の脂質代謝経路とその応用。**微細藻類によるエネルギー生産と事業展望**（竹山春子監修）、シーエムシー出版、東京、第6章、p.47-56、**2012**年。
 13. 岩本浩二、白岩善博：ヨウ素と藻類。横山正孝監修：ヨウ素の化学と最新応用技術。シーエムシー出版、東京、**2011**（分担）
 14. 石川統他（編）：**生物学辞典**、pp. 1634、東京化学同人、東京、**2010**年12月。（項目分担）
 15. 白岩善博：**新しいエネルギー 藻類バイオマス** 渡邊信編、第3章 藻類バイオマス資源 3-1 e. 光合成 (p80-96)、みみずく舎、東京、**2010**年9月（分担）
 16. 白岩善博：**新しいエネルギー 藻類バイオマス** 渡邊信編、第3章 藻類バイオマス資源 3-1 g. 藻類の増殖特性(p101-106)、みみずく舎、東京、**2010**年9月（分担）
 17. 岩本浩二、白岩善博：マリンメタゲノムライブラリーからの微量元素濃縮関連遺伝子のスクリーニングとその応用。松永是・竹山春子監修：マリンメタゲノムの有効利用、シーエムシー出版、東京、**2009**年（分担）
 18. 白岩善博：第8章 エネルギー獲得系、塩井祐三、井上 弘、近藤矩朗編：ベーシックマスター植物生理学、オーム社、東京、**2009**年2月（分担）。
 19. 白岩善博：分子生物学におけるモデル生物としての微生物-クロレラとクラミドモナス。渡邊信他編：微生物の事典、p. 66-69、朝倉書店、東京、**2008**年9月（分担）
 20. 茅野啓介、白岩善博。ココリス 加藤隆史 監修：テクニカルレポートシリーズ：バイオミネラルリゼーションとそれに倣う新機能材料の創製、シーエムシー出版、東京、**2007**年（分担）
 21. 佐藤真奈美、白岩善博：円石藻における光合成と石灰化。竹井祥郎編：海洋生命系のダイナミクスシリーズ（全5巻）第2巻：海洋生物の機能—生命は海にどう適応しているか、pp. 374-392、東海大学出版会、秦野、**2005**年6月（分担）
 22. 白岩善博：光合成電子伝達阻害およびクロロフィル蛍光測定法。日本雑草学会編「雑草科学実験法」p. 274-280、日本雑草学会、**2001**年（分担）
 23. 都筑幹夫、白岩善博：藻類の光合成。宮地重遠編「現代植物生理学第1巻 光合成」pp.125-133、朝倉書店（東京）、**1992**年（分担）

24. 白岩善博, 広川豊康: クロレラ (クラミドモナス, セネデスマス). 江上信雄, 勝見允行編「実験生物学講座 1, 生物材料調製法」pp.235-249, 丸善 (東京), **1982** 年 (分担)
25. 白岩善博, 宮地倭文子, 宮地重遠: 放射性同位元素を用いた炭酸固定経路の研究法. 加藤栄, 宮地重遠, 村田吉男編「光合成研究法」pp.193-223, 共立出版 (東京), **1981** 年 (分担)
26. 宮地重遠, 白岩善博, 佐藤和彦: 付録 (光合成活性測定法). 宮地重遠, 田中市郎, 加藤栄編「葉緑体」pp.339-348, 理工学社 (東京), **1980** 年 (分担)
27. 中村保典, 白岩善博: 葉緑体の物質代謝. 宮地重遠, 田中市郎, 加藤栄編「葉緑体」pp.99-137, 理工学社 (東京), **1980** 年 (分担)
28. L.O. ビヨルン著, 宮地重遠監訳 (分担翻訳: 白岩善博): 「光と生命—光生物学入門」, 理工学社 (東京), **1976** 年 [Translation from English version]

(5) 和文総説・解説等 [Review Articles published in Japanese Scientific Magazines and Scientific Society Publication]

1. 辻敬典, 白岩善博 (2015) 紅藻由来の葉緑体を持つ二次共生藻類の炭素代謝、松田祐介編集・解説特集「光合成炭素代謝研究の新展開」、光合成研究 25 (3): 202-211. (解説) Open Access: <http://photosyn.jp/journal/kaiho74.pdf> (text), <http://photosyn.jp/journal-cover.html> (cover).
2. 白岩善博 (2015) 海洋微細藻類の光合成・物質生産と地球環境、THE CHEMICAL TIMES 2015 No.4 (通巻 238 号) 2-9. (総説) Open Access: <http://www.kanto.co.jp/times/index.html>
3. 大井信明, 白岩善博 (2015) イオントラップ型質量分析を導入した海洋微細藻類の脂質メタボローム解析、RADIOISOTOPES 64 : 255-264. (2015 年 4 月号に掲載). (総説、査読有) Open Access: <https://www.jstage.jst.go.jp/browse/radioisotopes/-char/ja/>.
4. 岩本浩二, 白岩善博 (2014) 藻類による放射性元素の生物濃縮と除染の可能性、生物工学会誌 92 (6): 271-275.
5. 白岩善博 (2014) 特集: いま放射能除染を考える～バイオからの挑戦～、特集によせて [2]、生物工学会誌 92 (6): 270.
6. 白岩善博 (2014) 特集: いま放射能除染を考える～バイオからの挑戦～、特集によせて [1]、生物工学会誌 92 (5): 212.
7. 辻敬典, 白岩善博 (2013) 海洋植物プランクトンの光合成炭素代謝の多様性、化学工業 64 (7): 1-7.
8. 馬場将人, 白岩善博 (2013) 光合成生物はどう二酸化炭素の上昇に応答するか? **RADIOISOTOPES** 62 (3): 175-179. (Mini-review)
9. 馬場将人, 白岩善博 (2013) オイル産生藻類ボトリオコッカスによる炭化水素生合成のメカニズム. **RADIOISOTOPES** 62 (2): 57-60. (Mini-review)
10. 白岩善博 (2012) 海洋微細藻類を利用する炭素隔離と再生可能な次世代エネルギー生産. 理大科学フォーラム 8 月号 (通算 338 号): 13-16.
11. 岩本浩二, 白岩善博 (2012) Cs, Sr, I を特異的に吸着する藻による除去技術 (特集: 再考 セシウムと放射性物質). **化学** 67 (11): 32-33.
12. 鈴木石根, 白岩善博 (2012) 海洋ハプト藻類のアルケノン合成経路の解明とオイル生産への基盤技術の開発に向けて. **光合成研究** 22 (1) (通巻 63 号) : 39-43.
13. 辻敬典, 白岩善博 (2011) 光合成生物の炭素代謝の多様性—海洋微細藻類の研究から—.

RADIOISOTOPES 60(9): 393-395. (ミニレビュー)

14. 新家弘也、白岩善博 (2009) 海洋植物プランクトンによる必須微量元素セレンの利用戦略. **RADIOISOTOPES** 58 (8): 587 - 590. (ミニレビュー)
15. 岩本浩二、白岩善博 (2005) 海洋光合成におけるヨウ素の生理機能. **FIU Report** 6: 1-4.
16. 小幡年弘、白岩善博 (2004) 円石藻の増殖に欠かせない微量元素とは？元素濃縮能を有する海洋微細藻類を利用して海洋環境を改善する. **化学と生物** 42 (6) : 354-356.
17. 白岩善博 (2002) 円石形成. 堀 輝三, 大野正夫, 堀口健雄編, **21世紀初頭の藻学の現況**. pp. 18-20. 日本藻類学会, 山形.
18. 白岩善博 (2001) 光合成生物による石灰化と地球 CO₂ 環境. **日本結晶成長学会誌** 28(2): 53-60.
19. 沢田健, 白岩善博 (2001) 微細藻類の光合成から地球環境を読む～培養実験からの地球史研究. **月刊地球** 23 (3) : 191-196.
20. 岩本浩二, 白岩善博 (2001) 海洋生物における微量元素セレンの生理機能. **バイオサイエンスとバイオインダストリー** 59 (2) : 22-25.
21. 白岩善博 (2000) 円石藻の光合成と石灰化. **月刊海洋** 32 巻 6号 (6月号) : 412-417.
22. 小幡年弘, 岩本浩二, 白岩善博, 中島栄一, 河合賢司, 進藤英世 (2000) バイオサイエンスのためのアイソトープ測定機器 (第三シリーズ) ーラジオリミノグラフィー (RLG, 放射線測定ルミネッセンス輝尽性発光技術) 17. イメージングプレート (IP) によるダブルラベル試料の分析. **RADIOISOTOPES** 49 (12): 623-636.
23. 白岩善博 (1999) 微細藻類の CO₂ 順化・適応の分子機構. **生物工学会誌** 第 77 巻・第 4 号 (4月号) : 154-157.
24. 白岩善博 (1998) 海洋微細藻類による CO₂ 固定化. **BIO INDUSTRY** 15 (1) : 35-43.
25. 白岩善博 (1997) 海洋石灰藻による CO₂ 固定. **遺伝** 51: 49-53.
26. 佐藤 朗, 小林 寛, 白岩善博 (1997) 光合成キネティクス研究法—微細藻類の光合成による"CO₂"の利用および固定特性の解析. **藻類 Jpn. J. Phycol. (Sorui)** 45: 21-28.
27. 白岩善博 (1994) 海産性単細胞石灰藻の CO₂ 固定機構と地球温暖化. **RADIOISOTOPES** 43: 179-180. (ミニレビュー)
28. 白岩善博 (1987) 植物と CO₂. **長野県植物研究会誌 (20周年特集号)** 20 : 1-10. (特別寄稿)

(6) 特許 [Patents]

1. 白岩善博, 岩本浩二, 神谷充伸 : 藻類由来のマンニトール合成関連遺伝子、特願 2009-222216 (2009.9.28 出願)
2. 白岩善博, 岩本浩二, 南誓子 “藻類由来の AMP デアミナーゼ”, 特願 2008-029481 (2008. 2. 4 出願).

(7) その他 [Others]

1. Xiaohui Z, Shiraiwa Y, Sui Z, Zhang X* (2005) Cloning and characterization of hoxY gene and its application in phylogentic study of *Arthrospira* and *Spirulina*. *Journal of Ocean University of China* vol. 6 (in Chinese)

2. 松澤敏広、世良耕一郎、二ツ川章二、白岩善博 (2005) Fe 欠乏により引き起される微細藻類の細胞内元素組成の変化-細胞内元素ホメオスタシス解析へのアプローチ-. NMCC 報文集 12.
3. 小幡年弘、世良耕一郎、二ツ川章二、白岩善博 (2002) セレン欠乏により誘導される円石藻細胞の元素含量の変動. NMCC 報文集 10、Published on-line <<http://www.jrias.or.jp/index.cfm/6,1598,107,156,html>>.
4. 小幡年弘、世良耕一郎、二ツ川章二、白岩善博 (2002) セレン欠乏により誘導される円石藻細胞の元素含量の変動. NMCC 報文集 9.
5. Shiraiwa Y (2001) Analysis of high-CO₂-inducible proteins located in the periplasm and released from cells in microalgae. In T. Kobayashi (ed.), Report on Grant-in-aid for Scientific Research on Priority Area (A)-Bio-molecular Design for Biotargeting (No. 296), Nagoya University, Nagoya. pp. 184-189
6. 岩本浩二、猪川倫好、川野辺英昭、白岩善博 (2001) : 耐塩性獲得に寄与するマンニトール生合成関連遺伝子のクローニング. 平成 12 年度助成研究報告集 I, p. 223-233, ソルトサイエンス研究財団 (東京) .
7. 白岩善博, 岩本浩二 (2001) : 円石藻におけるセレン要求性の解析と異常増殖の制御. 平成 12 年度助成研究報告集 I, p. 277-287, ソルトサイエンス研究財団 (東京) .
8. 白岩善博 (2001) 微細藻類による CO₂ 固定の制御と海洋炭素循環-海洋科学と植物生理学の連携の重要性. 炭素循環の解明と予測に関する研究の現状と展望-ナショナルプランの策定に向けて-. 地球科学技術フォーラム/地球変動研究委員会 炭素循環グループ, p. 7-9.
9. 白岩善博 (2000) 微細藻類の CO₂ 応答性細胞表面局在分子および細胞外放出分子の解析. 平成 12 年度文部省科学研究費補助金 (特定領域研究(I)) 成果報告書「バイオターゲッティングのための生体分子デザイン」(代表 小林 猛), p. 169-174.
10. 白岩善博 (2000) 微細藻類の CO₂ 応答性細胞表面局在分子および細胞外放出分子の解析. 平成 11 年度文部省科学研究費補助金 (特定領域研究(I)) 成果報告書「バイオターゲッティングのための生体分子デザイン」(代表 小林 猛), p. 186-191.
11. 白岩善博 (2000) (財) 地球環境産業技術研究機構 (訪問記事), Isotope News 1 月号, 14-17 頁.
12. Shiraiwa Y, Zhang X, Wei D, Yang G, Iwamoto K, Seki H and Zhang X* (2000) Growth regulation of cyanobacteria and microalgae for the production of useful biomaterials and the phytoremediation of aquatic environment. **Biosystem Studies** 3: 195-197.
13. 白岩善博 (1999) : 微細藻類の CO₂ 応答性細胞表面局在分子および細胞外放出分子の解析. 平成 10 年度文部省科学研究費補助金 (特定領域研究(I)) 成果報告書「バイオターゲッティングのための生体分子デザイン」(代表 小林 猛), p. 171-176.
14. 白岩善博, 山本正伸, 井上勲 (1998) 古海洋温度復元に関する有機地球化学および植物生育生理学の連携による共同研究. 平成 10 年度文部省科学研究費補助金 (重点領域研究) 成果報告書「全地球誌解読—物理的地球環境の日常性とイベント—」(代表 熊沢峰夫), p. 212-215.
15. 白岩善博 (1998) 円石藻の生育および光合成速度と環境条件との相関関係解析の重要性—有機地球化学のためのバイオマーカー試料の供給—. 平成 9 年度文部省科学研究費補助金 (基盤研究 (C)) 成果報告書「バイオマーカー分子の同位体組成による過去の気候変動解読に関する研究」(代表 南川雅男) .
16. 白岩善博 (1998) 海洋性微細藻類の特異的選択的分離手法の開発. 平成 8 年度補正研究成果報告書, 海洋バイオテクノロジー研究所 (東京) .
17. Shiraiwa Y* (1996) Diurnal change in the rate of the utilization of CO₂ by Foraminifera (Protozoa) and a hermatypic coral, Scleractinia (Coelenterata). In: The Sohgen Maru in Palau and Pohnpei 1995. Edited by

M. Endo, pp. 108-115. Marine Biotechnology Institute (Tokyo, Japan).

18. 白岩善博 (1995) 好塩藻による大気中 CO₂ 濃度低減化システムの開発とカルボニックアンヒドラーゼの耐塩性特性の解析 II. 平成 5 年度助成研究報告集 I, p.313-323, ソルトサイエンス研究財団 (東京) .
19. 白岩善博 (1994) 好塩藻による大気中 CO₂ 濃度低減化システムの開発とカルボニックアンヒドラーゼの耐塩性特性の解析 I. 平成 4 年度助成研究報告集 I, p.285-297, ソルトサイエンス研究財団 (東京) .
20. 栗原紀夫、井尻憲一、白岩善博他編集 (1996) バイオサイエンスのためのアイソトープ測定機器 (第二シリーズ)、日本アイソトープ協会(東京).
21. 栗原紀夫、井尻憲一、白岩善博他編集 (1994) バイオサイエンスのためのアイソトープ測定機器、日本アイソトープ協会(東京).

以上