



Professor Kawano's brief curriculum vitae

Name: Shigeyuki Kawano
Date of Birth: May 14, 1951
Nationality: Japan

Degree: Dr. Sci.

Present posts: Graduate School of Frontier Sciences, the University of Tokyo

1999- Professor of Plant Life Science

1991- Associate Professor of Department of Biology, Faculty of Science, the University of Tokyo

1988- Assistant Professor of Department of Biology, Faculty of Science, the University of Tokyo

Appointments: 2014- Vice president of Japan Mendel Society
2000- Member of the Science council of Japan

Editors: 2007- Editor in chief of *Cytologia*
1995- Advisory editor of *Physarum* NewsLetter

Education: 1982- Dr. Sci. from Tokyo Metropolitan University
1977- Graduate School of Sciences, Okayama University, Ms. Sci. in Biology
1975- Faculty of Sciences, Okayama University, B. Sci. in Biology

Memberships: the Botanical Society of Japan, the Genetics Society of Japan, the Japanese Society of Plant Morphology, the Japanese Society of Plant Physiologists, the Japanese Society of Phycology

Papers Kawano et al. (last 5 years):

1. Kawamoto, H., Yamanaka K., Koizumi A., Hirata A. and Kawano, S.: Cell death and cell cycle arrest of *Silene latifolia* stamens and pistils after *Microbotryum lychnidis-dioicae* infection. *Plant Cell Physiol.* (2017) . DOI: 10.1093/pcp/pcw193
2. Sato Y, Yamaguchi M, Hirano T, Fukunishi N, Abe T, Kawano S.: Effect of water velocity on *Undaria pinnatifida* and *Saccharina japonica* growth in a novel tank system designed for macroalgae cultivation. *Journal of Applied Phycology.* (2016). DOI: 10.1007/s10811-016-1013-2
3. Sato, Y., Hirano, T., Niwa, K., Suzuki, T., Fukunishi, N., Abe, T., and Kawano, S.: Phenotypic differentiation in the morphology and nutrient uptake kinetics among *Undaria pinnatifida* cultivated at six sites in Japan. *J. Appl. Phycol.* (2016). DOI: 10.1007/s10811-016-0857-9
4. Suzuki, R., Ota, S., Yamazaki, T., Toyoda, A., Nonaka, S., Matsukura, C., Kuwano, K., and Kawano, S.: Morphological changes of giant mitochondria in the unicellular to multicellular phase during parthenogenesis of *Ulva partita* (Ulvophyceae) revealed by expression of mitochondrial targeting GFP and PEG transformation. *Phycol. Res.* 64, 176-184, 2016. (DOI: 10.1111/pre.12132)
5. Ota, S., Yoshihara, M., Yamazaki, T., Takeshita, T., Hirata, A., Konomi, M., Oshima, K., Hattori, M., Bišová, K., Zachleder, V., and Kawano, S.: Deciphering the relationship among phosphate dynamics, electron-dense body and lipid accumulation in the green alga *Parachlorella kessleri*. *Sci. Rep.* 6, 25731 (2016) 5. (DOI: 10.1038/srep25731)
6. Yamamoto, M., Handa, S., Kawachi, K., Miyamura, S., Nagumo, T., Hirata, A., and Kawano, S.: Mother Cell Wall Cleavage during Filament Formation in *Stichococcus bacillaris* (Trebouxiophyceae, Chlorophyta). *Cytologia*, 81, 35-39, (2016). (DOI: 10.1508/cytologia.81.35)
7. Ota, S., Oshima, K., Yamazaki, T., Kim, S., Yu, Z., Yoshihara, M., Takeda, K., Takeshita, T.,

- Hirata, A., Bišova, K., Zachleder, V., Hattori, M., and Kawano, S.: Highly efficient lipid production in the green alga *Parachlorella kessleri*: draft genome and transcriptome endorsed by whole-cell 3D ultrastructure. *Biotechnol. Biofuels.* 9, 13 (2016). (DOI: 10.1186/s13068-016-0424-2)
8. Kazama, Y., Ishii, K., Aonuma, W., Ikeda, T., Kawamoto, H., Koizumi, A., Filatov, D. A., Chibalina, M., Bergero, R., Charlesworth, D., Abe, T., and Kawano, S.: A new physical mapping approach refines the sex-determining gene positions on the *Silene latifolia* Y-chromosome. *Sci. Rep.* 6, 18917 (2016). DOI: 10.1038/srep18917
 9. Takeshita, T., Ota, S., Takeda, K., Yamazaki, T. and Kawano, S.: A simple method for measuring the starch and lipid contents in the cell of microalgae. *Cytologia*, 80, 475-481, 2015. (DOI: 10.1508/cytologia.80.475)
 10. Vítová, M., Bišová, K., Kawano, S., and Zachleder, S.: Accumulation of energy reserves in algae: From cell cycles to biotechnological applications. *Biotechnol. Adv.* 33, 1204-1218 (2015). DOI: 10.1016/j.biotechadv.2015.04.012.
 11. Ichihara, K., Suzuki, R., Yamazaki, T., Ota, S., Mogi, Y., Kagami, K., Kuwano, K. and Kawano, S.: *Ulva partita* sp. nov., a Novel Enteromorpha-Like Ulva Species from Japanese Coastal Areas. *Cytologia* 80, 261–270 (2015). DOI: 10.1508/cytologia.80.261
 12. Tanaka, W., Ohmori, Y., Ushijima, T., Matsusaka, H., Matsushita, T., Kumamaru, T., Kawano, S., and Hirano, H.Y.: Axillary Meristem Formation in Rice Requires the WUSCHEL Ortholog TILLERS ABSENT1. *Plant Cell*, 27(4), 1173-1184 (2015). DOI: 10.1105/tpc.15.00074
 13. Ota, S. and Kawano, S. : Life cycle and lectin-binding patterns in the chytrid fungus *Chytrium hyalinus*. *Cytologia*, 80:125-129 (2015). DOI: 10.1508/cytologia.80.125
 14. Yamazaki, T., Endo, M., Ito, K., Suzuki, R., Ota, S., Kuwano, K., Miyamura, S., Toyoda, A. and Kawano, S.: HAP2/GCS1 is involved in the sexual reproduction system of the marine macroalga *Ulva compressa*. *Cytologia* 79, 575-584 (2014). DOI: 10.1508/cytologia.79.575
 15. Suzuki, R., Yamazaki, T., Toyoda, A. and Kawano, S.: Technical note: A Transformation system using rbcS N-terminal region fused with GFP demonstrates pyrenoid targeting of the small subunit of RubisCO in *Ulva compressa*. *Cytologia* 79, 427-428 (2014). DOI: 10.1508/cytologia.79.427
 16. Yamazaki, T., Hirai, C., Ota, S., Kuwano, K., and Kawano, S.: Use of FM1-43, a membrane-specific fluorescent dye, to estimate plasma membrane integrity in the cryopreservation of green algae. *Cryo Letters*, 35, 180-187 (2014). PMID: 24997835
 17. Takeshita, T., Ota, S., Yamazaki, T., Hirata, A., Zachleder, V., and Kawano, S.: Starch and lipid accumulation in eight strains of six *Chlorella* species under strong illumination and aeration culture conditions. *Bioresour. Technol.* 158, 127–134 (2014) 4. DOI: 10.1016/j.biortech.2014.01.135
 18. Ishii, K., Nishiyama, R., Shibata, F., Kazama, Y., Abe, T., and Kawano, S.: Rapid degeneration of noncoding DNA regions surrounding SIAP3X/Y after recombination suppression in a dioecious plant, *Silene latifolia*. *G3*, 3, 2121-2130 (2013). DOI: 10.1534/g3.113.008599
 19. Ota, S., Matsuda, T., Takeshita, T., Yamazaki, T., Kazama, Y., Abe, T., Kawano, S.: Phenotypic spectrum of *Parachlorella kessleri* (Chlorophyta) mutants produced by heavy-ion irradiation. *Bioresour. Technol.* 149, 432-438 (2013) 12. DOI: 10.1016/j.biortech.2013.09.079
 20. Ohnuki, S., Nogami, S., Ota, S., Watanabe, K., Kawano, S., Ohya, Y.: Image-based monitoring system for green algal *Haematococcus pluvialis* (Chlorophyceae) cells during culture. *Plant Cell Physiol.* 54, 1917-1929 (2013) 11. DOI: 10.1093/pcp/pct126
 21. Fernandes, B., Teixeira, J., Dragone, G., Vicente, A.A., Kawano, S., Bisova, K., Pribyl, P., Zachleder, V., and Vitova, M.: Relationship between starch and lipid accumulation induced by nutrient depletion and replenishment in the microalga *Parachlorella kessleri*. *Bioresour. Technol.* 144, 268–274 (2013). DOI: org/10.1016/j.biortech.2013.06.096
 22. Imoto, Y., Kuroiwa, H., Yoshida, Y., Ohnuma, M., Fujiwara, T., Yoshida, M., Nishida, K., Yagisawa, F., Hirooka, S., Miyagishima, S.Y., Misumi, O., Kawano, S., Kuroiwa, T. : Single-membrane-bounded peroxisome division revealed by isolation of dynamin-based machinery. *Proc Natl Acad Sci USA.* 110, 9583-9588 (2013) 6. DOI: 10.1073/pnas.1303483110
 23. Yamazaki, T., Owari, S., Ota, S., Sumiya, N., Yamamoto, M., Watanabe, K., Nagumo, T., Miyamura, S. and Kawano, S.: Localization and evolution of septins in algae. *Plant J.* 74, 605–614 (2013) 5. DOI: 10.1111/tpj.12147
 24. Wayama, M., Ota, S., Matsuura, M., Nango, N., Hirata, A., and Kawano, S.: Three-dimensional

- ultrastructural study of oil and astaxanthin accumulation during encystment in the green alga *Haematococcus pluvialis*. PLoS ONE, 8(1): e53618 (2013) 1. DOI: 10.1371/journal.pone.0053618
25. Aonuma, W., Shimizu, Y., Ishii, K., Fujita, N., and Kawano, S.: Maturation timing of stamens and pistils in the dioecious plant *Silene latifolia*. J. Plant Res. 126, 105-112 (2013). DOI: 10.1007/s10265-012-0510-x
 26. Mizuno, Y., Sato, A., Watanabe, K., Hirata, A., Takeshita, T., Ota, S., Sato, N., Zachleder, V., Tsuzuki, M., and Kawano, S.: Sequential accumulation of starch and lipid induced by sulfur deficiency in *Chlorella* and *Parachlorella* species. Bioresour. Technol. 129, 150–155 (2013) 2. DOI: org/10.1016/j.biortech.2012.11.030
 27. Li, X., Pribyl, P., Binova, K., Kawano, S., Cepak, V., Zachleder, V., Cizkova, M., Branyikova, I., and Vitova, M.: The Microalga *Parachlorella kessleri*: A Novel Highly Efficient Lipid Producer. Biotechnol. Bioeng. 110, 97–107 (2013). DOI: 10.1002/bit.24595
 28. Kazama, Y., Nishihara, K., Fujiwara, M. T. Abe, T., and Kawano, S.: SIWUS1; A novel X-linked gene having no homologous Y-linked copy in *Silene latifolia*. G3, 2, 1269-1278 (2012). DOI: 10.1534/g3.112.003749
 29. Sumiya, N., Owari, S., Watanabe, K., and Kawano, S.: The role of multiple FtsZ rings in chloroplast division under oligotrophic and eutrophic conditions in the unicellular green alga, *Nannochloris bacillaris* (Chlorophyta, Trebouxiophyceae). J. Phycol. 48, 1187-1196 (2012). DOI: 10.1111/j.1529-8817.2012.01204.x
 30. Nishikawa, T., Moriyama, Y., Sato, M., Sano, T., Hasezawa, S., Ota, S., and Kawano, S.: Isolation of mitochondrial and plastid *ftsZ* genes and analysis 1 of the organelle targeting sequence in the diatom *Chaetoceros neogracile* (Diatoms, Bacillariophyceae). Phycol. Res. 60, 123-136 (2012). DOI: 10.1111/j.1440-1835.2012.00644.x
 31. Fujita, N., Torii, C., Ishii, K., Aonuma, W., Shimizu, Y., Kazama, Y., Abe, T., and Kawano, S.: Narrowing Down the Mapping of Plant Sex-Determination Regions Using New Y Chromosome-Specific Markers and Heavy-Ion-Beam Irradiation-Induced Y Deletion Mutants in *Silene latifolia*. G3, 2, 271-278 (2012) .DOI: 10.1534/g3.111.001420