

(1)原著論文 (accept を含む) / Original Papers

1. T. Jia, C. Gao, Y. Cui, J. Wang, Y. Ding, Y. Cai, T. Ueda, A. Nakano and L. Jiang: "ARA7 (Q69L) expression in transgenic Arabidopsis cells induces the formation of enlarged multivesicular bodies," J. Exp. Bot. 64, 2817-2829 (2013).
2. R. Asaoka, T. Uemura, S. Nishida, T. Fujiwara, T. Ueda and A. Nakano: "New insights into the role of Arabidopsis RABA1 GTPases in salinity stress tolerance," Plant Signal. Behav. 8, e25377 (2013).
3. T. Inoue, Y. Kondo, S. Naramoto, A. Nakano and T. Ueda: "RAB5 activation is required for multiple steps in *Arabidopsis thaliana* root development," Plant Cell Physiol. 54, 1648-1659 (2013).
4. M. Iwai, C.-G. Pack, Y. Sako and Akihiko Nakano: "Photosystem II antenna phosphorylation-dependent protein diffusion determined by fluorescence correlation spectroscopy," Sci. Rep. 3, 2833 (2013).
5. M. Tominaga, A. Kimura, E. Yokota, T. Hamaguchi, T. Shimmen, K. Yamamoto, A. Nakano and K. Ito: "Cytoplasmic streaming velocity as a plant size determinant," Dev. Cell 27, 345-352 (2013).
6. Y. Suda and A. Nakano: "Rab GAP cascade regulates dynamics of Ypt6 during the Golgi maturation," Proc. Natl. Acad. Sci. U. S. A. 110, 18976-18981 (2013).
7. R. Hirata, C. Nihei and A. Nakano: Isoform-selective oligomer formation of *Saccharomyces cerevisiae* p24 family proteins," J. Biol. Chem. 288, 37057-37070 (2013).
8. M. Iwai, M. Yokono and A. Nakano: "Visualizing structural dynamics of thylakoid membranes," Sci. Rep. 4, 3768 (2014).
9. T. Uemura, Y. Suda, T. Ueda and A. Nakano: "Dynamic behavior of the *trans*-Golgi network in root tissues of Arabidopsis revealed by super-resolution live imaging," Plant Cell Physiol. 55, 694-670 (2014).
10. Y. Hashiguchi, D. Yano, K. Nagafusa, T. Kato, C. Saito, T. Uemura, T. Ueda, A. Nakano, M. Tasaka and M. T. Morita: "A unique HEAT repeat-containing protein SHOOT GRAVITROPISM 6 is involved in vacuolar membrane dynamics in gravity sensing cells of Arabidopsis inflorescence stem," Plant Cell Physiol. 55, 811-822 (2014).
11. M. Fujiwara, T. Uemura, K. Ebine, Y. Nishimori, T. Ueda, A. Nakano, M. H. Sato, and Y. Fukao: "Interactomics of Qa-SNARE in *Arabidopsis thaliana*," Plant Cell Physiol. 55, 781-789 (2014).
12. H. Kawai-Toyooka, T. Mori, T. Hamaji, M. Suzuki, B. J. S. C. Olson, T. Uemura, T. Ueda, A. Nakano, A. Toyoda, A. Fujiyama and H. Nozaki: "Sex-specific post-translational regulation of the gamete fusogen GCS1 in the isogamous volvocine alga *Gonium pectoral*," Eukaryot. Cell 5:648-656 (2014).
13. Kazuo Kurokawa, Michiyo Okamoto, and Akihiko Nakano (2014). Contact of *cis*-Golgi with ER exit sites executes cargo capture and delivery from the ER. Nat. Commun. 5, 3653 (2014).
14. N. Abe, M. Hiroshima, H. Maruyama, Y. Nakashima, Y. Nakano, A. Matsuda, Y. Sako, Y. Ito and H. Abe: "Rolling circle amplification in prokaryotic translation system using small circular RNA," Angew. Chem. Int. Ed. 52, 7004-7008, (2013).
15. K. Mouri and Y. Sako: "Optimality conditions for cell-fate heterogeneity that lead to the ability to maximize effects of growth factors in PC12 cells," PLoS Comp. Biol. 9, e1003320, (2013).
16. C. Arai, H. Kurahashi, C.-G. Pack, Y. Sako and Y. Nakamura: "Clearance of yeast eRF-3 prion [PSI⁺] by amyloid enlargement due to the imbalance between chaperone Ssa1 and cochaperone Sgt2," Translation. 1, e26574 (2013).
17. S. Takanezawa, A. Baba, Y. Sako, Y. Ozaki, A. Date, K. Toyama and S. Morita: "Image enhancement of optical images for binary system of melanocytes and keratinocytes," Proc. SPIE 8879, 887901-1-4 (2013).
18. S. Takanezawa, Y. Sako, Y. Ozaki and S. Morita S: "Mechanism of sequential order determination in bio-Raman correlation alayasis," Proc SPIE 8879, 887902-1-6 (2013).
19. J. Ishihara, M. Tachikawa, A. Mochizuki, Y. Sako, H. Iwasaki and S. Morita: "Raman imaging of the

- diverse states of the filamentous cyanobacteria,” Proc. SPIE 8879, 88790V-1-4 (2013).
20. T. Sultana, H. Takagi, M. Morimatsu, H. Teramoto, C. B. Li, Y. Sako and T. Komatsuzaki: “Non-Markovian properties and multiscale hidden Markovian network buried in single molecule time series,” J. Chem. Phys. 139, 245101-1-12 (2013).
 21. R. Maeda, M. Hiroshima, A. Wada, S. Nishimura, Y. Sako, Y. Shichida and Y. Imamoto: “Single-molecule observation of the ligand-induced population shift of rhodopsin, a G-protein coupled receptor,” Biophys. J., 106, 915-924 (2014).
 22. C.-G. Pack, H. Yukii, A. Toh-e, T. Kudo, H. Tsuchiya, A. Kaiho, E. Sakata, S. Murata, Y. Yokosawa, Y. Sako, W. Boumeister, K. Tanaka and Y. Saeki: “Quantitative live-cell imaging reveals spatio-temporal and cytoplasmic assembly of the 26S proteasome,” Nat. Commun. 5, 4396 (2014).

(2) 著書、解説等 / Book Editions, Review Papers

1. T. Uemura and A. Nakano: “Plant TGNs: dynamics and physiological functions,” Histochem. Cell Biol. 140, 341-345 (2013).
2. A. Nakano: “Super-resolution confocal live imaging microscopy – cutting-edge technology in cell biology,” Conf. Proc. IEEE Eng. Med. Biol. Soc. 2013, 133-135 (2013).
3. K. Kurokawa, M. Ishii, Y. Suda, A. Ichihara, and A. Nakano: “Live cell visualization of Golgi membrane dynamics by super-resolution confocal live imaging microscopy,” Methods Cell Biol. 118, 235-242 (2013).
4. Y. Ito, T. Uemura, and A. Nakano: “Formation and maintenance of the plant Golgi apparatus,” Intl. Rev. Cell Mol. Biol. 310, 221-287 (2014).
5. 山本明弘、廣島通夫、佐甲靖志: “Localization microscopy の原理と受容体イメージングへの応用”、光技術コンタクト 51, 33-40 (2013).
6. 佐甲靖志: “ヘレグリン(HRG)と ErbB の結合と ErbB の 2 量体化”、生体の科学 64, 466-467 (2013).
7. 廣島通夫、佐甲靖志: “1 分子キネティクス解析により示された ErbB 受容体の反応調節機構”、生物物理 53, 317-318 (2013).

(3) 招待講演 / Invited Talks

1. A. Nakano: “Super-resolution confocal live imaging microscopy – cutting-edge technology in cell biology,” 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Osaka, Japan, July (2013).
2. A. Nakano and K. Kurokawa: “Live imaging of cargo delivery from the ER to the Golgi apparatus,” Golgi Apparatus Symposium, Bad Ischl, Austria, September (2013).
3. T. Uemura and A. Nakano: “Plant TGNs: dynamics and physiological functions,” Golgi Apparatus Symposium, Bad Ischl, Austria, September (2013).
4. A. Nakano: “Super-resolution confocal live imaging microscopy (SCLIM) to understand membrane trafficking within and around the Golgi apparatus,” Institut Jacques Monod Seminar. Paris, France, September (2013).
5. A. Nakano: “Molecular mechanisms of intracellular membrane trafficking and its roles in plant physiology,” Max-Planck Inst. for Plant Breeding Seminar, Cologne, Germany, September (2013).
6. Y. Sako, “Single molecule imaging of signal transduction in living cells,” 3rd McGill-RIKEN Scientific Workshop, Montreal, Canada, June (2013).
7. Y. Arata, T. Kobayashi, M. Hiroshima, C.-G. Pack, T. Shibata and Y. Sako: “*C. elegans* meets single-molecule detection technologies; The embryonic polarization system is driven by state transition of PAR-2 protein molecules,” 19th International *C. elegans* Meeting, Los Angeles, USA, June (2013).
8. Y. Sako: “Single-molecule imaging of intracellular reactions,” Kyoto University Cell Biology, Developmental Biology, and Systems Biology Course Meeting, Kyoto, July (2013).
9. Y. Sako: “Single-molecule imaging of ErbB-Ras-MAPK systems,” 1st Korea Symposium on Current

Trends in Biophysics, Jeju, Korea, August (2013).

10. Y. Arata, M. Hiroshima, C.-g. Pack, T. J. Kobayashi, T. Shibata and Y. Sako: “Developmental biology meets single-molecule detection technologies; Measurement-based mathematical modeling of PAR protein localization in *C. elegans* embryos,” CDB Seminar, Kobe, September (2013).
11. Y. Arata, M. Hiroshima, C.-G. Pack, T. J. Kobayashi, T. Shibata and Y. Sako: “Measurement-based mathematical modeling of PAR/aPKC-dependent cell polarization in animal development,” 51th Annual Meeting of Biophysical Society of Japan, Kyoto, October (2013).
12. Y. Sako: “Single-molecule analysis of intracellular reaction networks,” KHUPO 14th Annual International Proteomics Conference “Translational Proteomics,” Busan, Korea, March (2014).

(4)特許出願 / Patent Applications

1. 中野明彦, 市原昭: “対物レンズの駆動制御方法及び蛍光顕微鏡システム,” 特願 2013-175477, 2013年8月27日

(5) その他特筆すべき事項・トピックス (新聞記事、雑誌表紙等) / Topics

1. 日本経済新聞, “植物の葉の大きさ制御 理研など実験成功”, 2013年11月12日.
(同様記事ほか4紙)
2. NHK 全国ニュース, “遺伝子操作で植物の大きさ制御”, 2013年11月27日.
3. 朝日新聞, “葉の成長のカギ解明, 細胞内の流れに違い”, 2013年12月19日.
4. 科学新聞, “ゴルジ体シス槽, 小胞体に積極的に接触し積荷タンパク質受け取り”, 2014年4月25日.
5. *Plant Cell Physiol.* 55 (4) (2014) の表紙に T. Uemura et al. の論文の写真が掲載 (理研の SCLIM で撮影したもの).