

## **Tamaki Sukanuma, Ph. D**

Research Investigator

### Education

April 1997 to March 2001: Department of Molecular Embryology, Graduate School, Tokyo Medical and Dental University, Tokyo, Japan.

Awarded the degree of Ph.D. for a thesis entitled "Suppression of Tumor Cell Growth by Reintroduction of p300." Work supervised by Dr. Masa-Aki Ikeda.

### Publications

1. Sukanuma, T.\* and Workman, J. L. (2023), Chromatin balances cell redox and energy homeostasis, *Epigenetics & Chromatin* 16 (46), 46. (\*corresponding author)
2. Sukanuma, T.\* (2022), Beyond Moco Biosynthesis—Moonlighting Roles of MoaE and MOCS2. *molecules* 27, 3733. (\*corresponding author)
3. Sukanuma, T.\* and Workman, J. L. (2022), MPTAC links alkylation damage signaling to sterol biosynthesis. *Redox Biology* 51, 102270. (\*corresponding author)
4. Sukanuma, T.\*, Swanson, S. K., Gogol, M., Garrett, T. J., Florens, L., Washburn, M. P., Workman, J. L. (2021), MOCS2 links nucleotide metabolism to nucleoli function. *Journal of molecular cell biology* 13 (11) 838–840. (\*corresponding author)
5. Church, M.C., Workman, J. L., and Sukanuma, T.\* (2021) (\*corresponding author). Macrophages, Metabolites, and Nucleosomes: Chromatin at the Intersection between Aging and Inflammation, *International Journal of Molecular Sciences*. 22 (19), 10274.
6. Sukanuma, T.\* and Workman, J. L. (2021) (\*\*corresponding author). Nucleotide Metabolism Behind Epigenetics. *Frontiers in Endocrinol.* 12:731648. (\*corresponding author).
7. Palma, M., Riffo, E.N., Sukanuma, T., Washburn, M.P., Workman, J.L., Pincheira, R., and Castro, A.F. (2019). Identification of a nuclear localization signal and importin beta members mediating NUA1 nuclear import inhibited by oxidative stress. *Journal of cellular biochemistry* 120, 16088-16107.
8. Sukanuma, T\*., Swanson, S.K., Gogol, M., Garrett, T.J., Conkright-Fincham, J., Florens, L., Washburn, M.P., and Workman, J.L. (2018). MPTAC Determines APP Fragmentation via Sensing Sulfur Amino Acid Catabolism. *Cell reports* 24, 1585-1596. (\*corresponding author)
9. Sukanuma, T\*., and Workman, J.L. (2018). Chromatin and Metabolism. *Annual review of biochemistry* 87, 27-49. (\*corresponding author)
10. Oh, S., Sukanuma, T\*., Gogol, M.M., and Workman, J.L. (2018). Histone H3 threonine 11 phosphorylation by Sch9 and CK2 regulates chronological lifespan by controlling the nutritional stress response. *eLife* 7. (\*corresponding author)
11. Sukanuma, T\*., and Workman, J.L. (2016). Histone modification as a reflection of metabolism. *Cell Cycle* 15, 481-482. (\*corresponding author)
12. Sukanuma, T.\*, Swanson, S.K., Florens, L., Washburn, M.P., and Workman, J.L. (2016). Moco biosynthesis and the ATAC acetyltransferase engage translation initiation by inhibiting latent PKR activity. *Journal of molecular cell biology* 8, 44-50. (\*corresponding author)
13. Li, S., Swanson, S.K., Gogol, M., Florens, L., Washburn, M.P., Workman, J.L., and Sukanuma, T\* (2015). Serine and SAM Responsive Complex SESAME Regulates Histone

- Modification Crosstalk by Sensing Cellular Metabolism. *Mol Cell* 60, 408-421. (\*corresponding author)
14. Suganuma, T.\* (2013). Emerging Areas of Chromatin Research, *Fundamentals of Chromatin*, Chapter 14, 553-572, Springer. (\*corresponding author).
  15. Zhang, D., Suganuma, T., and Workman, J.L. (2013). Acetylation regulates Jun protein turnover in *Drosophila*. *Biochim Biophys Acta* 1829, 1218-1224.
  16. Suganuma, T\*., and Workman, J.L. (2013). Chromatin and signaling. *Current opinion in cell biology* 25, 322-326. (\*corresponding author)
  17. Suganuma, T., and Workman, J.L. (2012). MAP kinases and histone modification. *Journal of molecular cell biology* 4, 348-350.
  18. Suganuma, T\*., Mushegian, A., Swanson, S.K., Florens, L., Washburn, M.P., and Workman, J.L. (2012). A metazoan ATAC acetyltransferase subunit that regulates mitogen-activated protein kinase signaling is related to an ancient molybdopterin synthase component. *Molecular & cellular proteomics : MCP* 11, 90-99. (\*corresponding author)
  19. Steinberg, X.P., Hepp, M.I., Fernandez Garcia, Y., Suganuma, T., Swanson, S.K., Washburn, M., Workman, J.L., and Gutierrez, J.L. (2012). Human CCAAT/enhancer-binding protein beta interacts with chromatin remodeling complexes of the imitation switch subfamily. *Biochemistry* 51, 952-962.
  20. Suganuma, T., and Workman, J.L. (2011). Signals and combinatorial functions of histone modifications. *Annual review of biochemistry* 80, 473-499.
  21. Suganuma, T., and Workman, J.L. (2010). WD40 repeats arrange histone tails for spreading of silencing. *Journal of molecular cell biology* 2, 81-83.
  22. Suganuma, T., and Workman, J.L. (2010). Features of the PHF8/KIAA1718 histone demethylase. *Cell research* 20, 861-862.
  23. Suganuma, T., Mushegian, A., Swanson, S.K., Abmayr, S.M., Florens, L., Washburn, M.P., and Workman, J.L. (2010). The ATAC acetyltransferase complex coordinates MAP kinases to regulate JNK target genes. *Cell* 142, 726-736.
  24. Suganuma, T., and Workman, J.L. (2008). Crosstalk among Histone Modifications. *Cell* 135, 604-607.
  25. Suganuma, T., Pattenden, S.G., and Workman, J.L. (2008). Diverse functions of WD40 repeat proteins in histone recognition. *Genes Dev* 22, 1265-1268.
  26. Suganuma, T., Gutierrez, J.L., Li, B., Florens, L., Swanson, S.K., Washburn, M.P., Abmayr, S.M., and Workman, J.L. (2008). ATAC is a double histone acetyltransferase complex that stimulates nucleosome sliding. *Nature structural & molecular biology* 16515, 364-372.
  27. Suganuma, T., and Ikeda, M. (2008). Tumor Growth Suppression by the Coactivator p300. *Journal of Oral Bioscience* 50, 115-124.
  28. Guelman, S., Suganuma, T., Florens, L., Weake, V., Swanson, S.K., Washburn, M.P., Abmayr, S.M., and Workman, J.L. (2006). The essential gene *wda* encodes a WD40 repeat subunit of *Drosophila* SAGA required for histone H3 acetylation. *Mol Cell Biol* 26, 7178-7189.
  29. Guelman, S., Suganuma, T., Florens, L., Swanson, S.K., Kiesecker, C.L., Kusch, T., Anderson, S., Yates, J.R., 3rd, Washburn, M.P., Abmayr, S.M., *et al.* (2006). Host cell factor and an uncharacterized SANT domain protein are stable components of ATAC, a novel

- dAda2A/dGcn5-containing histone acetyltransferase complex in *Drosophila*. *Mol Cell Biol* 26, 871-882.
30. Carrozza, M.J., Li, B., Florens, L., Suganuma, T., Swanson, S.K., Lee, K.K., Shia, W.J., Anderson, S., Yates, J., Washburn, M.P., *et al.* (2005). Histone H3 methylation by Set2 directs deacetylation of coding regions by Rpd3S to suppress spurious intragenic transcription. *Cell* 123, 581-592.
31. Ma, K., Araki, K., Ichwan, S.J., Suganuma, T., Tamamori-Adachi, M., and Ikeda, M.A. (2003). E2FBP1/DRIL1, an AT-rich interaction domain-family transcription factor, is regulated by p53. *Molecular cancer research : MCR* 1, 438-444.
32. Suganuma, T., Kawabata, M., Ohshima, T., and Ikeda, M.A. (2002). Growth suppression of human carcinoma cells by reintroduction of the p300 coactivator. *Proc Natl Acad Sci U S A* 99, 13073-13078.
33. Suganuma, T. (2002). [Effect of mutation in the p300 transcription coactivator on transcriptional response and cell proliferation of human carcinoma cell lines]. *Kokubyo Gakkai zas Journal of the Stomatological Society, Japan* 69, 139-151.
34. Suganuma, T. (2002). Effect of Mutation in the p300 Transcription Coactivator on Transcriptional Response and Cell Proliferation of Human Carcinoma Cell Lines. *The Journal of the Stomatological Society, Japan* 71, 139-151.
35. Ohshima, T\*\*., Suganuma, T\*\*., and Ikeda, M. (2001). A novel mutation lacking the bromodomain of the transcriptional coactivator p300 in the SiHa cervical carcinoma cell line. *Biochemical and biophysical research communications* 281, 569-575. \*\*These authors contributed equally to this work.

#### Publications online

1. Tamaki Suganuma\* (2010). The ATAC Acetyltransferase Complex Coordinates MAP kinases to regulate JNK Target Genes., *A First Author Review of Life Science Current Research in Top Journal, Japan.* (\*corresponding author)