Requests for Collaboration

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Research Interests

- Drug discovery based on the biotechnology
- Development of the methods for generation of highly functional monoclonal antibodies and biopharmaceuticals

Creative Achievements in The Application of New and Existing Science and Technology

(1) Generation of monoclonal antibodies specific for various cells and tissues including cancer and stem cells
We have established the "shot-gun" approach based on medial-iliac lymph node method. This "shot-gun" approach is very useful for the investigation and identification for cell surface markers of various cells and tissues. We have succeeded in generating monoclonal antibodies against some cancer cells and iPS/ES cells using this approach.
(2) Development of novel methods for generation of monoclonal antibody
Rabbit antibody has well known to have high specificity and affinity for various antigens. Recently, we have developed the method for generation of rabbit monoclonal antibodies based on single-cell technology.

Technology (Product, Process, Device, Service etc.) That I Want to Request for Collaboration

- Cancer therapy
- Regenerative medicine
- Diagnostic pharmaceutical

A List of 5 Key Publications

- EB1-binding-myomegalin protein complex promotes centrosomal microtubules functions. Bouguenina H, Salaun D, Mangon A, Muller L, Baudelet E, Camoin L, Tachibana T, Cianférani S, Audebert S, Verdier-Pinard P, Badache A. ***Proc. Natl. Acad. Sci. USA.*****114**, E10687-E10696 (2017).
- Testis-Specific Histone Variant H3t Gene Is Essential for Entry into Spermatogenesis. Ueda, J., Harada, A., Urahama, T., Machida, S., Maehara, K., Hada, M., Makino, Y., Nogami, J., Horikoshi, N., Osakabe, A., Taguchi, H., Tanaka, H., Tachiwana, H., Yao, T., Yamada, M., Iwamoto, T., Isotani, A., Ikawa, M., Tachibana, T., Okada, Y., Kimura, H., Ohkawa, Y., Kurumizaka, H. and Yamagata, K. ***Cell Rep.*** **18**, 593-600 (2017).
- Crystal structure and characterization of novel human histone H3 variants, H3.6, H3.7, and H3.8. Taguchi, H., Xie, Y., Horikoshi, N., Maehara, K., Harada, A., Nogami, J., Sato, K., Arimura, Y., Osakabe, A., Kujirai, T., Iwasaki, T., Semba, Y., Tachibana, T., Kimura, H., Ohkawa, Y. and Kurumizaka, H. ***Biochemistry*** **56**, 2184-2196 (2017).
- Generation of Rat Monoclonal Antibodies Against Human Pancreatic Ductal Adenocarcinoma Cells. Higashi, K., Fujii, N., Kushida, M., Yamada, K., Suzuki, N., Saito, K. and Tachibana, T. ***Monoclon. Antib. Immunodiagn. Immunother.*** **35**, 148-154 (2016).
- A panel of specific monoclonal antibodies directed against various phosphorylated histone H3. Yoshimi, T., Ohkawa, Y., Azuma, M. and Tachibana, T. ***Monoclon. Antib. Immunodiagn. Immunother.*** **32**, 119-124 (2013).