Hematology

Principal Investigator Shigeru Chiba
E-mail.address schiba-tky@umin.net
URL http://www.ketsunai.com

Other Faculty Members

Associate Professor: Mamiko Sakata-Yanagimoto
Associate Professor: Hidekazu Nishikii
Associate Professor: Naoshi Obara
Associate Professor: Yuichi Hasegawa
Assistant Professor: Takayasu Kato
Assistant Professor: Naoki Kurita
Assistant Professor: Manabu Kusakabe
Assistant Professor: Yasuhisa Yokoyama

Major Scientific Interests of the Group

Molecular mechanisms underlying normal and abnormal hematopoiesis: genetic and epigenetic abnormalities in hematologic malignancies are studied using patient-derived samples and genetically engineered mouse models. Including studies of microenvironmental cells in the malignancies.

Projects for Regular Students in Doctoral or Master's Programs

- Role of epigenetic regulator, Tet enzymes in hematologic malignancies.
- Studying microenvironmental cell abnormalities in the bone marrow and lymphoid malignancies.

Study Programs for Short Stay Students (one week – one trimester)

- Learn procedures for analyzing progenitor cells from mouse bone marrow by flowcytometry
- Learn blood cell transplantation in mouse model

Selected Publications

1) Sakamoto T, Obara N, Nishikii K, Kato T, et al., Sakata-Yanagimoto M, Takahashi S, and Chiba S. Notch signaling in Nestin-expressing cells in the bone marrow maintains erythropoiesis via macrophage integrity. ***Stem Cells*** (doi: 10.1002/stem.3011) [Epub ahead of print]
2) Fujisawa M, Sakata-Yanagimoto M, et al., Gaulard P, Ohshima K, and Chiba S. Activation of RHOA-VAV1 signaling in angioimmunoblastic T-cell lymphoma. ***Leukemia***. 32(3):694-702, 2018.
3) Suehara Y, Sakata-Yanagimoto M, et al., Kusakabe M, Kurita N, Kato T, Yokoyama Y, Nishikii H, Obara N, Hasegawa Y, Chiba S. Liquid biopsy for the identification of intravascular large B-cell lymphoma. ***Haematologica***. 103(6):e241-e244, 2018.
4) Pierini A*, Nishikii H*, et al., Chiba S, and Negrin RS. Foxp3+ regulatory T cells maintain the bone marrow microenvironment for B cell lymphopoiesis. ***Nat Commun***. 8:15068, 2017 (*equal contribution)
5) Nguyen TB, Sakata-Yanagimoto M, et al., and Chiba S. Identification of cell-type-specific mutations in nodal T-cell lymphomas. ***Blood Cancer J***. 7(1):e516, 2017
6) Makishima H, et al., Chiba S, Miyano S, Shih LY, Haferlach T, Ogawa S, and Maciejewski JP. Dynamics of clonal evolution in myelodysplastic syndromes. ***Nat Genet***. 49(2):204-12, 2017.
7) Nishikii H, et al., Chiba S, and Negrin RS. DR3 signaling modulates the function of Foxp3+ regulatory T cells and the

severity of acute graft-versus-host disease. ***Blood***. 128(24):2846-58, 2016.

8) Nishikii H, et al., Nolan GP, Negrin R, and Chiba S. Unipotent megakaryopoietic pathway bridging hematopoietic stem cells and mature megakaryocytes. ***Stem Cells***. 33(7):2196-207, 2015.
9) Kato T, Sakata-Yanagimoto M, Nishikii H, et al., and Chiba S. Hes1 suppresses acute myeloid leukemia development through FLT3 repression. ***Leukemia***. 29(3):576-85, 2015.
10) Sakata-Yanagimoto M, Enami T, Yoshida K, et al., and Chiba S. Somatic RHOA mutation in angioimmunoblastic T cell lymphoma. ***Nat Genet***. 46(2):171-5, 2014