



Shigeru Chiba

Faculty of Medicine

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Affiliation : Department of Hematology, Faculty of Medicine

Theme

- Hematologic malignancies
- From fine molecular studies to therapeutic discovery

Keyword lymphoma, leukemia, targeting microenvironment, targeting lipid

Highlight

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

Other Faculty Members

Associate Professor:

Mamiko Sakata-Yanagimoto, Hidekazu Nishikii

Assistant Professor:

Yasuhisa Yokoyama, Naoki Kurita, Manabu Kusakabe, Takayasu Kato, Tatsuhiro Sakamoto

Applications and Prospects

- Live stockを含む多数の患者検体のマルチオミクス解析結果が臨床情報と統合されている。これらに基づくマウスモデルが作成されて研究を進展させている。独自のゲノム解析結果から多施設第II相臨床研究（医師主導治験）に繋げた実績がある（T細胞リンパ腫におけるRHOA遺伝子変異同定とその後の研究に基づくTKIの効果検証）。一気通貫研究ができる。

Literature, intellectual property, work

- Chiba S, Sakata-Yanagimoto M. Advances in understanding of angioimmunoblastic T-cell lymphoma. *Leukemia* 34(10):2592-2606, 2020
- Fukumoto K, Sakata-Yanagimoto M, Fujisawa M, et al., Iqbal J, Ohshima K, Chiba S. VAV1 mutations contribute to development of T-cell neoplasms in mice. *Blood* 136(26):3018-32, 2020
- Nguyen TB, Sakata-Yanagimoto M, Fujisawa M, et al., Ogawa S, Ohshima K, Chiba S. Dasatinib Is an Effective Treatment for Angioimmunoblastic T-cell Lymphoma. *Cancer Res* 80(9):1875-84, 2020
- Bernard E, Nannya Y, et al., Chiba S, et al., Ogawa S, Papaemmanuil E. Implications of TP53 allelic state for genome stability, clinical presentation and outcomes in myelodysplastic syndromes. *Nat Med* 26(10):1549-56, 2020