

Akihide Yoshimi, MD, PhD

Akihide Yoshimi is the Chief of the Div. Cancer RNA Research at the National Cancer Center Research Institute (NCCRI), Japan, and a Visiting or Affiliated Professor at multiple leading academic institutions including the University of Tokyo, Keio University, and Tokyo University of Science. A physician-scientist with a strong interest in RNA biology, cancer genomics, and hematological malignancies, Dr. Yoshimi earned his MD from the University of Tokyo in 2003 and completed his clinical training in internal medicine and hematology at the University of Tokyo Hospital and NTT Medical Center Tokyo.

He received his PhD in Medical Science from the University of Tokyo in 2011, where he studied transcriptional dysregulation in leukemias. He subsequently held clinical and academic positions at the University of Tokyo before moving to the United States for postdoctoral research at the Memorial Sloan Kettering Cancer Center (MSKCC), where he served as a Visiting Investigator, LLS Special Fellow, and ultimately a Senior Research Scientist in the Human Oncology and Pathogenesis Program.

In 2020, Dr. Yoshimi returned to Japan to establish an independent research unit at the National Cancer Center Research Institute (NCCRI), dedicated to elucidating the molecular pathogenesis of cancer through RNA regulation. Now known as the Division of Cancer RNA Research, his laboratory integrates cutting-edge transcriptomic technologies, RNA biology, and therapeutic discovery. The team is actively developing RNA-based cancer therapies, including anti-cancer mRNA vaccines and antisense oligonucleotide treatments.

Education/Work History

INSTITUTION AND LOCATION	DEGREE	START	END
<Education>			
Faculty of Medicine, The University of Tokyo	MD	04/1997	03/2003
Graduate School of Medicine, The University of Tokyo	PhD	04/2007	03/2011
<Work History>			
The University of Tokyo Hospital, Tokyo, Japan	Resident	06/2003	05/2004
The Kanto Medical Center NTT, Tokyo, Japan	Resident	06/2004	03/2005
The Kanto Medical Center NTT, Tokyo, Japan	Senior Resident	04/2005	05/2006
The University of Tokyo Hospital, Tokyo, Japan	Senior Resident	06/2006	12/2007
The University of Tokyo Hospital, Tokyo, Japan	Assistant Professor	04/2011	05/2015
Memorial Sloan Kettering Cancer Center, New York	Visiting Investigator	07/2015	07/2018
Memorial Sloan Kettering Cancer Center, New York	LLS Special Fellow	07/2018	06/2020
Memorial Sloan Kettering Cancer Center, New York	Senior Research Scientist	08/2018	06/2020
National Cancer Center Research Institute, Tokyo	Section Head	07/2020	08/2022
Kitasato University School of Science, Kanagawa	Visiting Professor	04/2022	
National Cancer Center Research Institute, Tokyo	Chief	09/2022	
Hiroshima University School of Medicine, Hiroshima	Visiting Professor	04/2023	
Keio University School of Medicine, Tokyo	Visiting Professor	04/2024	
Institute of Science Tokyo, Tokyo	Collaborating Professor	04/2024	
The University of Tokyo, Tokyo	Collaborating Professor	04/2025	

Awards/Honors

Year	Award/Honor
2009	Research Fellowship for Young Scientists, Japan Society for the Promotion of Science
2011	Keystone Symposia Scholarship, Keystone Symposia
2011	Encouragement Award, Japanese Society of Hematology (JSH)
2012	Kirinji Award, 8th Young Researchers' Meeting on Hematology
2013	Young Investigator Special Award, Japan Leukemia Research Fund
2015	Academic Encouragement Award, Japanese Cancer Association (JCA)
2016	Overseas Research Fellowship, Japan Society for the Promotion of Science (JSPS)
2017	Abstract Achievement Award, American Society of Hematology (ASH)
2018	Abstract Achievement Award, American Society of Hematology (ASH)
2019	AACR Scholar-in-Training Award, American Association for Cancer Research (AACR)
2020	Travel Award, FASEB Hematologic Malignancies Conference
2020	Year's Best, American Society of Hematology (ASH)
2020	LLS CDP Fellow Achievement Award, Leukemia & Lymphoma Society (LLS)
2021	Takeda Science Foundation Medical Research Grant, Takeda Science Foundation
2022	Global Research Award, American Society of Hematology (ASH)
2022	Bioindustry Incentive Award, Japan Bioindustry Association (JBA)
2022	JCA-Mauvernay Award, Japanese Cancer Association (JCA)
2023	Leave a Nest Research Award - Advanced Research Promotion Division (Leave a Nest)
2024	Excellence Award, Japan Health Foundation

Selected Publications (*equal contribution; #corresponding)

1. Komura K[#], Hirosuna K, Tokushige S, Nishimura K, Ishida M, Hayashi T, Ura A, Ohno T, Yamazaki S, Nakamori K, Kinoshita S, Tsujino T, Maenosono R, Ajiro M, Yoshikawa Y, Takai T, Tsutsumi T, Taniguchi K, Tanaka T, Takahara K, Konuma T, Inamoto T, Hirose Y, Ono F, Shiraishi Y, Yoshimi A[#], Azuma H. The impact of FGFR3 alterations on the tumor microenvironment and the efficacy of immune checkpoint inhibitors in bladder cancer. **Mol Cancer** 22(1):185, 2023
2. Ma HL, Bizet M, Da Costa CS, Murisier F, de Bony EJ, Wang MK, Yoshimi A, Lin KT, Riching KM, Caine E, Wang X, Beckman JI, Arya S, Droin N, Calonne E, Hassabi B, Zhang QY, Li A, Putmans A, Malbec L, Hubert C, Lan J, Mies F, Yang Y, Solary E, Daniels D, Gupta YK, Deplus R, Abdel-Wahab O, Yang YG, Fuks F. SRSF2 plays an unexpected role as reader of m5C on mRNA, linking epitranscriptomics to cancer. **Mol Cell** 83(23):4239-4254, 2023
3. Shiraishi Y, Okada A, Omori I, Chiba K, Iida N, Yamauchi H, Kosaki K, Yoshimi A. Systematic identification of intron retention associated variants from massive publicly available transcriptome sequencing data. **Nat Commun** 13(1):5357, 2022
4. De Munck S, Provost M, Kurikawa M, Omori I, Mukohyama J, Felix J, Bloch Y, Abdel-Wahab O, Bazen F, Yoshimi A, Savvides SN. Structural basis of cytokine-mediated activation of ALK family receptors. **Nature** 600(7887):143-147, 2021
5. Liu Z*, Yoshimi A^{*,#}, Wang J, Cho H, Chun-Wei Lee S, Ki M, Bitner L, Chu T, Shah H, Liu B, Mato AR, Ruvolo P, Fabbri G, Pasqualucci L, Abdel-Wahab O, Rabadan R[#]. Mutations in the RNA Splicing Factor SF3B1 Promote Tumorigenesis through MYC Stabilization. **Cancer Discov** 10(6):806-821, 2020
6. Yoshimi A^{*}, Lin KT*, Wiseman DH*, Rahman MA, Pastore A, Wang B, Lee SC, Micol JB, Zhang XJ, de Botton S, Penard-Lacronique V, Stein EM, Cho H, Miles RE, Inoue D, Albrecht TR, Somerville TCP, Batta K, Amaral F, Simeoni F, Wilks DP, Cargo C, Intlekofer AM, Levine RL, Dvinge H, Bradley RK, Wagner EJ, Krainer AR, Abdel-Wahab O. Coordinated alterations in RNA splicing and epigenetic regulation drive leukaemogenesis. **Nature** 574(7777):273-277, 2019

7. Inoue D, Chew GL, Liu B, Michel BC, Pangallo J, D'Avino AR, Hitchman T, North K, Lee SC, Bitner L, Block A, Moore AR, Yoshimi A, Escobar-Hoyos L, Cho H, Penson A, Lu SX, Taylor J, Chen Y, Kadoch C, Abdel-Wahab O, Bradley RK. Spliceosomal disruption of the non-canonical BAF complex in cancer. **Nature** 574(7778):432-436, 2019
8. Seiler M*, Yoshimi A*, Darman R*, Chan B, Keaney G, Thomas M, Agrawal AA, Caleb B, Csibi A, Sean E, Fekkes P, Karr C, Klimek V, Lai G, Lee L, Kumar P, Lee SC, Liu X, Mackenzie C, Meeske C, Mizui Y, Padron E, Park E, Pazolli E, Peng S, Prajapati S, Taylor J, Teng T, Wang J, Warmuth M, Yao H, Yu L, Zhu P, Abdel-Wahab O, Smith PG, Buonamici S. H3B-8800, an orally available small-molecule splicing modulator, induces lethality in spliceosome-mutant cancers. **Nat Med** 24(4):497-504, 2018
9. Taylor J, Pavlick D, Yoshimi A, Marcelus C, Chung SS, Hechtman JF, Benayed R, Cocco E, Durham BH, Bitner L, Inoue D, Chung YR, Mullaney K, Watts JM, Diamond EL, Albacker LA, Mughal TI, Ebata K, Tuch BB, Ku N, Scaltriti M, Roshal M, Arcila M, Ali S, Hyman DM, Park JH, Abdel-Wahab O. Oncogenic TRK fusions are amenable to inhibition in hematologic malignancies. **J Clin Invest** 128(9):3819-3825, 2018
10. Cimmino L, Dolgalev I, Wang Y, Yoshimi A, Martin GH, Wang J, Ng V, Xia B, Witkowski MT, Mitchell-Flack M, Grillo I, Bakogianni S, Ndiaye-Lobry D, Martín MT, Guillaumot M, Banh RS, Xu M, Figueroa ME, Dickins RA, Abdel-Wahab O, Park CY, Tsigos A, Neel BG, Aifantis I. Restoration of TET2 Function Blocks Aberrant Self-Renewal and Leukemia Progression. **Cell** 170(6):1079-1095, 2017
11. Yoshimi A*, Balasis ME*, Vedder A, Feldman K, Ma Y, Zhang H, Lee SC, Letson C, Niyongere S, Lu SX, Ball M, Taylor J, Zhang Q, Zhao Y, Youssef S, Chung YR, Zhang XJ, Durham BH, Yang W, List AF, Loh ML, Klimek V, Berger MF, Stieglitz E, Padron E, Abdel-Wahab O. Robust patient-derived xenografts of MDS/MPN overlap syndromes capture the unique characteristics of CMML and JMML. **Blood** 130(4):397-407, 2017
12. Yoshimi A, Toya T, Nannya Y, Takaoka K, Kirito K, Ito E, Nakajima H, Hayashi Y, Takahashi T, Moriya-Saito A, Suzuki K, Harada H, Komatsu N, Usuki K, Ichikawa M, Kurokawa M. Spectrum of clinical and genetic features of patients with inherited platelet disorder with suspected predisposition to hematological malignancies: a nationwide survey in Japan. **Ann Oncol** 27(5):887-95, 2016
13. Yoshimi A*, Toya T*, Kawazu M, Ueno T, Tsukamoto A, Iizuka H, Nakagawa M, Nannya Y, Arai S, Harada H, Usuki K, Hayashi Y, Ito E, Kirito K, Nakajima H, Ichikawa M, Mano H, Kurokawa M. Recurrent CDC25C mutations drive malignant transformation in FPD/AML. **Nat Commun** 5:4770, 2014
14. Kagoya Y, Yoshimi A, Kataoka K, Nakagawa M, Kumano K, Arai S, Kobayashi H, Saito T, Iwakura Y, Kurokawa M. Positive feedback between NF- κ B and TNF- α promotes leukemia-initiating cell capacity. **J Clin Invest** 124(2):528-42, 2014
15. Yoshimi A, Goyama S, Watanabe-Okochi N, Yoshiki Y, Nannya Y, Nitta E, Arai S, Sato T, Shimabe M, Nakagawa M, Imai Y, Kitamura T, Kurokawa M. Evi1 represses PTEN expression and activates PI3K/AKT/mTOR via interactions with polycomb proteins. **Blood** 117(13):3617-28, 2011

Complete List of Published Work in My Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/akihide.yoshimi.1/bibliography/public/>