



## Fan Bingwen Eugene

Senior Consultant, Department of Haematology, Tan Tock Seng Hospital. Assistant Professor, Lee Kong Chian School of Medicine, Nanyang Technological University

### Research and Innovation Interests:

- Medical Innovation (Medical Devices, Diagnostics Artificial Intelligence)
- Thrombosis and Haemostasis
- Sustainability in Healthcare
- Art and Medicine

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### Biography

Dr Eugene Fan is a Consultant Haematologist at Tan Tock Seng Hospital, Singapore, and Honorary Haematologist at Northern Health, Victoria, Australia. His research interests encompass AI-driven diagnostics, thrombosis and haemostasis, medical innovation, and sustainability in health care. He serves as an Associate Editor for Seminars in Thrombosis & Hemostasis (STH), Research and Practice in Thrombosis and Haemostasis (RPTH), and the Annals of Hematology, and sits on the Editorial Board of the American Journal of Hematology.

Dr Fan's work focuses on AI-enabled peripheral blood-film analysis, laboratory and clinical applications for thrombosis and haemostasis, and point-of-care and diagnostic medical devices supported by several filed patents. As a 2024 Singapore Biodesign Innovation Fellow and Faculty Member at the Centre for Healthcare Innovation (CHI), he aims to translate evidence-based insights into scalable, patient-centred solutions. His research is supported by funding from the National Medical Research Council and the National Health Innovation Centre.

### Selected Publications

- Fan BE, Yong BSJ, Li R, et al. From microscope to micropixels: A rapid review of artificial intelligence for the peripheral blood film. *Blood Rev.* 2024;64:101144. doi:10.1016/j.blre.2023.101144
- Fan BE, Milla K, McAlister S et al. Sustainable anticoagulation for climate resilient care. *Lancet Haematol.* 2025 Nov;12(11):e918-e925. doi: 10.1016/S2352-3026(25)00204-2.

- Fan BE, Favaloro EJ. Counting the carbon cost of heparin: an evolving tragedy of the commons?. Lancet Haematol. 2022;9(7):e469-e471. doi:10.1016/S2352-3026(22)00171-5
- Fan BE, Soh CKD, Heng HCD, et al. Development of a real time ultrasound guided lumbar puncture device. BMJ Innovations 2022;8:307-311.
- Fan BE, Wong SW, Sum CLL, et al. Hypercoagulability, endotheliopathy, and inflammation approximating 1 year after recovery: Assessing the long-term outcomes in COVID-19 patients. Am J Hematol. 2022; 97(7): 915-923. doi:10.1002/ajh.26575
- Fan BE, Togawa M. Acquired haemophilia in an Edo period Japanese surgical casebook. Lancet Haematol. 2022;9(12):e876-e877. doi:10.1016/S2352-3026(22)00357-X
- Fan BE. A probable case of aggressive extranodal natural killer T-cell lymphoma in a 19th century Qing Dynasty painting. Lancet Haematol. 2021;8(5):e321-e322. doi:10.1016/S2352-3026(21)00109-5
- Fan BE, Chong VCL, Chan SSW, et al. Hematologic parameters in patients with COVID-19 infection. Am J Hematol. 2020;95(6):E131-E134. doi:10.1002/ajh.25774

#### **Notable Research and Innovation Awards & Grants from Past 5 Years**

Name of Awards & Grants	Year Obtained
National Medical Research Council (NMRC) Clinician Innovator Development Award	2020
Young Investigator Award at the International Society for Laboratory Haematology	2021
National Research Foundation (NRF) Grant	2024
Singapore Biodesign Fellowship	2024
National Health and Innovation Centre (NHIC) Innovation to Industry (I2I) grant	2024
National Medical Research Council (NMRC) Clinician Innovator Award -Senior Investigator	2025

#### **Translating Research and Innovation Into Healthcare**

- <https://www.straitstimes.com/singapore/health/ai-tool-being-tested-for-faster-more-accurate-diagnosis-of-diseases>