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Brief Biography: Tetsuro Matano worked as an Orthopaedic surgeon for five years from 1985 and then started basic research on Virology. He obtained Doctor of Medical Sciences (D.M.Sc.) at Graduate School of Medicine, Univ. Tokyo in 1994. He started his study on AIDS pathogenesis using monkey AIDS models at NIAID, NIH, and reported crucial evidence indicating the importance of $CD8^+$ T cell responses in immunodeficiency virus control. He has been a Professor at Institute of Medical Science, Univ. Tokyo since 2006. He was appointed as the Director at AIDS Research Center in NIID in 2010, and the Deputy Director-General in NIID in 2022. At the establishment of the new organization, Japan Institute for Health Security (JIHS), in April, 2025, he was appointed as the Director-General of NIID in JIHS. He was a co-chair of AIDS Panel in U.S.-Japan Cooperative Medical Science Program in 2014-2023. He has been a Governing Council member of IAS and a co-chair of HIV Vaccine Industry Partnership Group since 2024. He has established a unique AIDS model using MHC-defined rhesus macaques for analysis of HIV/SIV-specific T cell responses and developed a novel CTL-based HIV vaccine system using Sendai viral vectors, whose clinical trial phase I at Rwanda, Kenya and U.K. in collaboration with IAVI confirmed its safety and immunogenicity. He is now working on virus-host immune interaction, microbiome, and development of vaccines against HIV-1, HTLV-1, and SARS-CoV-2 infection. He also plays a key role in facilitating human resource development and international cooperation in JIHS.

Publication List: https://square.umin.ac.jp/arc/en/Matano_Research_Group_EN/Publications.html

Current Representative Publications

1. Yamamoto H, Matano T. SIV-specific neutralizing antibody induction following selection of a PI3K drive-attenuated *nef* variant. **Elife** 12:RP88849, 2025.
2. Asigbee TW, et al. Virus-host immune interaction in asymptomatic HTLV-1 carriers. **Microbiol Spectr** 13:e0250724, 2025.
3. Nakamura-Hoshi M, et al. Prophylactic vaccination inducing anti-Env antibodies can result in protection against HTLV-1 challenge in macaques. **Mol Ther** 32:2328-2339, 2024.
4. Morino E, et al. Mpox Neutralizing Antibody Response to LC16m8 Vaccine in Healthy Adults. **NEJM Evid** 3:EVIDoa2300290, 2024.
5. Runtuwene LR, et al. Longitudinal analysis of microbiome composition in Ghanaians living with HIV-1. **Front Microbiol** 15:1359402, 2024.
6. Nakamura-Hoshi M, et al. HTLV-1 Proliferation after $CD8^+$ cell depletion by monoclonal anti-CD8 antibody administration in latently HTLV-1-infected cynomolgus macaques. **Microbiol Spectr** 11(4):e0151823, 2023.
7. Ishii H, et al. Env-independent protection of intrarectal SIV challenge by vaccine induction of Gag/Vif-specific $CD8^+$ T cells but not $CD4^+$ T cells. **Mol Ther** 30:2048-2057, 2022.
8. Ishii H, et al. Neutralizing-antibody-independent SARS-CoV-2 control correlated with intranasal-vaccine-induced $CD8^+$ T cell responses. **Cell Rep Med** 3:100520, 2022.
9. Moriyama S, et al. Temporal maturation of neutralizing antibodies in COVID-19 convalescent individuals improves potency and breadth to circulating SARS-CoV-2 variants. **Immunity** 54:1841-1852.e4, 2021.
10. Nomura T, et al. Subacute SARS-CoV-2 replication can be controlled in the absence of CD8+ T cells in cynomolgus macaques. **PLoS Pathog** 17:e1009668, 2021.