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Autoreactive B cells in rheumatoid arthritis

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Curriculum Vitae

Hendy Kristyanto was born and raised in Indonesia. His love in life sciences began since he was young which inspired him to win a silver medal at the National Biology Olympiad 2004. He won a Goldman Sachs Global Leader award from the Goldman Sachs Foundation in 2007 and obtained his Bachelor of Medical Sciences (*cum laude*) as well as Medical Doctor degrees from the University of Indonesia. He then won the Utrecht Excellence Scholarship to study MSc in cancer genomics and development biology at Utrecht University. He did three internships at the UMC Utrecht on cellular signaling pathway, at the German Cancer Research Center (DKFZ) in Heidelberg on the regulation of T cell immunological tolerance, and at the AMOLF Institute in Amsterdam on biophysical interaction between collagen network and fibroblasts. He then became interested in immunology and won the prestigious Clarendon Scholarship from Oxford University to study MSc in integrated immunology where he worked on the development of vaccines against breast cancer at the Jenner Institute. He then obtained the Oxford Alumni Bursary and Santander Scholarship to attend a summer school at Tokyo University on nanoscience. Back to the Netherlands, he did PhD in autoimmunity and chemical immunology at the Department of Rheumatology of Leiden University Medical Centre. During his PhD, he published in Science Translational Medicine journal, represented the Netherlands for Lindau Nobel Laureate Meeting 2018, and was selected to be one of the “Leaders of Tomorrow” in biotechnology to attend GapSummit 2019 at the Broad Institute of Massachusetts Institute of Technology and Harvard University. Following his PhD, he became a Biomarker Scientist at the Janssen Vaccines and Prevention (a part of Johnson & Johnson) in Leiden, researching on the hematological safety concern of Janssen’s COVID-19 vaccine. In his next career step, he aims to be a study-responsible physician or clinical science lead in immunology, vaccinology, hematology, or oncology therapeutic areas.

List of Publications

Kristyanto H, Holborough-Kerkvliet MD, Lelieveldt L, Bartels Y, Hammink R, van Schie KAJ, Toes REM, Bongers KM, Scherer HU. Multifunctional, multivalent PIC polymer scaffolds for targeting antigen-specific, autoreactive B cells. *ACS Biomaterials Science & Engineering*. 2022;8(4):1486-93. PMID: 35259296

Kristyanto H, Blomberg NJ, van der Voort EIH, Kerkman PF, Burgers LE, ten Brinck RM, van der Helm-van Mil AHM, Spits H, Baeten D, Huizinga TWJ, Toes REM, Scherer HU. Autoreactive B cell promote inflammation by their cellular characteristics in rheumatoid arthritis. *Science Translational Medicine* 2020; 2(570):eaaz5327. PMID: 33208502

Cossarizza A, Chang HD, Radbruch A, ..., ..., **Kristyanto H**, et al. Guidelines for the use of flow cytometry and cell sorting in immunological studies (second edition). *European Journal of Immunology* 2019; 49(10). PMID: 31633216

Lelieveldt LPWM, **Kristyanto H**, Pruijn GJM, Scherer HU, Toes, REM, Bongers KM. Sequential prodrug strategy to target and eliminate ACPA-selective autoreactive B cell. *Molecular Pharmaceutics* 2018 Dec 3;15(12):5565-5573. PMID: 30289723

Ross SH, Spanjaard E, Post A, Vliem M, **Kristyanto H**, de Rooij J, Bos JL. Rap1 can bypass the FAK-Src-Paxillin cascade to induce cell spreading and focal adhesion formation. *PLoS One* 2012;7(11):e50072. doi:10.1371/journal.pone.0050072. PMID: 23209645

Kristyanto H, Sonia S, Natsir PRA, Suraya F, Ibrahim N. The effect of classical and rock music on rat's appetite and body weight. *Journal of Indonesian Medical Association* 2010; 60:219-26.

Kristyanto H, Utomo AR. Pharmacogenetic application in personalized cancer treatment (special article). *Indonesian Journal of Internal Medicine* 2010 Apr;42 (2). PMID: 20513938

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When I first arrived at C5-61 I felt a little bit uneasy but Lise, Ayla, Hilde, Kim



Appendix

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