

Autoreactive B cells in rheumatoid arthritis Kristyanto, H.

Citation

Kristyanto, H. (2023, October 19). *Autoreactive B cells in rheumatoid arthritis*. Retrieved from https://hdl.handle.net/1887/3645918

Version: Publisher's Version

Licence agreement concerning inclusion of doctoral

License: thesis in the Institutional Repository of the University

of Leiden

Downloaded from: https://hdl.handle.net/1887/3645918

Note: To cite this publication please use the final published version (if applicable).

Curriculum Vitae

Hendy Kristvanto 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, Bonger 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

<u>Kristyanto H</u>, 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, ..., ..., <u>Kristyanto H</u>, *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, <u>Kristyanto H</u>, Pruijn GJM, Scherer HU, Toes, REM, Bonger 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

<u>Kristyanto H</u>, 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.

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

Acknowledgements

I would like to express my gratitude for the people who made the PhD journey possible until the finish line. Firstly, I want to give my highest appreciation to all the patients and donors who have donated their blood and/or synovial fluid for the research. May this work eventually be beneficial for the patients and the advancement of autoimmunity field. I would like to thank my direct supervisor Prof.dr. Uli Scherer for guiding me through the PhD process. I treasure the time we spent discussing data and plans for experiments. Your enthusiasm, humane and sympathetic approach are inspirational for me as an inexperienced doctor. I would also like to thank my promotor Prof.dr. René Toes who has been so vocal on what good science is. Graduating from your lab should mean never to forget good controls in all of experiments! Thank you for teaching me the lessons on professionalism, collaborative and multidisciplinary approach and how to think critically. Next, I want to thank Prof.dr. Tom Huizinga whose enthusiasm is always very exhilarating. You are a great motivator and leader. I want to thank Ellen van der Voort for being such an irreplaceable support in the lab. A true problem solver with a very kind heart. Calling you "the angel of the lab" is not an exaggeration. I would also thank Andreea Ioan-Facsinay, Leendert Trouw, Diane van der Woude, and Fina Kurreman for the critical insights during work discussions. This PhD project is a close collaboration with Dr. Lianne Lelieveldt from the lab of Dr. Kim Bonger of Radboud Universiteit. Lianne is a very smart, enthusiastic, kind, hard-working and fun collaborator. Thank you for all these years of collaboration and friendship. I also collaborated with another very talented synthetic chemist Dr. Bing Liu from the lab of Prof. dr. Mario van der Stelt of Leiden University. Thank you for the collaboration!

I want to thank my paranymphs and friends Linda Slot and Sanne Kampstra for the never-ending support and help. Sanne also helped with making the lay-out of the thesis, which I am forever grateful for. I was hired alongside two other PhD students: Hester Koppejan and Joost von Hegedus, the best partners in crime. Thanks for the energy-charging "student meeting" sessions. The characterization part of my PhD project was impossible without the brilliant previous work of Priscilla Kerkman. I would also thank Hanna Maassen for teaching me how to do measurement for ACPA B cells during her Master internship in the lab.

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

and Diahann made me feel welcome and I am forever grateful for that. The lab has a lot of expertise and people are willing to share their knowledge. I am thankful for the best technician team Ellen, Marioliin, Ioanneke, Annemarie, Aleida, Nivine, Gerrie, Joris and Linda Herb who helped me in many experiments or techniques, who created a homely atmosphere in the lab. I also made use, almost abuse, the FACS facility of LUMC. With major help of Sabrina, Edwin, Guido, Mariolijn, Simone, Rene we sorted the famously rare ACPA B cells. A considerable amount of time was spent in the shared ML-2 facility which was organized by Natascha from the Department of Nephrology. Thank you for being a very warm and welcoming host. As time went by, there were more PhDs and a postdoc working on ACPA B cells: Nienke, Corrie, Linda S, Rochelle, Sanne R, Theresa, Esther. Thank you for the wonderful time of sharing science, life, books, and laughter. I treasure the time we spent during B cell meeting, summer schools, conferences, and the social activities of course. Other members of the rheumatology lab Rosalie, Jyaysi, Myrthe, Cynthia, Mikhail, Karin, Emma, Rosanne, Marije, Marieke, Jacqueline, Veerle, Marc, Tobias, Anya and Daniel have been extremely helpful, supportive, fun to work with and share lab bench with. Lastly, I want to thank Miles and Karin for finishing up the PIC paper. Without your help, this thesis wouldn't be complete.

This thesis is dedicated to my parents F. C. Diana Hermawati and Hernanto, my sister, and my late grandmother who have been strong, nurturing, loving, supportive and understanding throughout my life. Nothing I have achieved is possible without your love. I also want to show my respect to all my teachers from kindergarten to university who have forged me to be who I am, who have inspired and taught me.

A special person I want to thank is my loving husband, Robert Stam. You were the reason why I came back from Oxford to the Netherlands. You have been very supportive, understanding, and loving, especially during the uncertain period after my PhD contract has finished. This thesis literally won't exist without you!