Preventing Leprosy: Epidemiological and immunological aspects of chemo- and immunoprophylaxis in leprosy patients' contacts

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LIST OF ABBREVIATIONS

Ab	antibody
BB	borderline borderline leprosy
BCG	Bacillus Calmette-Guérin
BI	Bacterial Index
BL	borderline lepromatous leprosy
BT	borderline tuberculoid leprosy
CCL4	chemokine (C-C motif) ligand 4
CMI	cell-mediated immunity
ELISA	Enzyme-Linked Immunosorbent Assay
ENL	erythema nodosum leprosum
HAART	highly active antiretroviral treatment
HIV	human immune deficiency virus
I	indeterminate leprosy
IDEAL	Initiative for Diagnostic & Epidemiological Assays for Leprosy
IFN-γ	interferon-gamma
IGRAs	Interferon-Gamma Release Assays (IGRAs)
IL-10	interleukin-10
IP-10	IFN-γ -inducible protein 10
IRIS	immune reconstitution inflammatory syndrome
LL	lepromatous leprosy
(L)PEP	(leprosy) post-exposure prophylaxis
M1	type 1 macrophages
M2	type 2 macrophages
MALTALEP	the Order of Malta-Grants-for-Leprosy-Research
MB	multibacillary
MDT	multidrug therapy
M. leprae	*Mycobacterium leprae*
NSE	non-specific effects
PGL-I	phenolic glycolipid I
PB	paucibacillary

SDR	single dose rifampicin
Th1	T helper 1
Th2	T helper 2
Treg	regulatory T-cells
TT	tuberculoid leprosy
UCP-LFA	up-converting phosphor technology lateral flow assay
WBA	whole-blood assay
WHO	World Health Organisation

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CURRICULUM VITAE

Renate Alicia Verbiest-Richardus was born in Rotterdam, the Netherlands, on the 13th of September 1983. She graduated cum laude from her secondary education (tweetalig-VW0) in 2001, which included an International Baccalaureate in English A1. She started medical school at the University of Leiden, and received her Master (Artsexamen Geneeskunde) in 2007. After an internship in internal medicine, she decided to specialize in Tropical Medicine and focused on mother-child health in the tropics, completing internships in both gynaecology and paediatrics (IJsselland Ziekenhuis, Capelle aan den IJssel; Amphia Ziekenhuis, Breda). This included a three months intensive training course in Tropical Medicine and Hygiene at the Koninklijk Instituut voor de Tropen in Amsterdam, The Netherlands. From 2012 to 2016 she moved to the northwest of Bangladesh with her family, and worked as a medical doctor on the gynaecology and paediatric department of LAMB Hospital. Alongside this, she supervised the MALTALEP/IDEAL trial from 2012 onwards, which had just started in Nilphamari Hospital, as part of the Rural Health Program (RHP) of The Leprosy Mission International Bangladesh (TLMIB). This is a collaboration of TLMIB, the department of Public Health at the Erasmus MC, University Medical Center Rotterdam and the Department of Infectious Diseases at the Leiden University Medical School (LUMC). In 2016 she started as an official PhD candidate at the Department of Infectious Diseases at the LUMC under supervision of Professor dr. Annemieke Geluk. Since 2017, Renate is trained at the LUMC to be a general practitioner.

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When I moved to Bangladesh together with my family in 2012 to work at LAMB Hospital, I never thought to be involved in leprosy research, let alone complete a doctoral thesis. However, when my predecessor Sabiena Feenstra left Bangladesh, someone was needed to take over from her and supervise the MALTALEP trial, which had just started in Nilphamari Hospital. Since the hospital was only an hour drive from our home, and the combination of research activities with my clinical activities at LAMB was appealing and feasible, I agreed to the project. And what a trip it has been! The four years in Bangladesh became extra special with the monthly visits to Nilphamari, sometimes together with Jelle and our children. After moving to the Netherlands, I visited Nilphamari five times in order to continue supervising the ongoing field work. And now, in my second year of GP training, the end of this 7 year trip is drawing to an end!

It would not have been possible for me to write this thesis without the help and support of many people around me, to some of whom I want to give particular mention. First, my promotor. Thank you so much for your continued support and guidance! I am amazed at how quick and concise you always reacted to my questions and drafts of articles, despite your numerous other activities and travels. You encouraged me to delve into leprosy immunology and the corresponding laboratory work, even though it did not always come naturally to me as a clinician.

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