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## **Plasmodium falciparum and Necator americanus in Gabon: observation, intervention, and controlled human infection**

Alabi, A.

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## List of publications

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### Included this thesis:

1. **Ayodele Alabi**, Fungai P Musangomunei, Fabrice Lotola-Mougeni, Juste C Bie-Ondo, Kristin Murphy , Paulin N Essone, Anita L Kabwende, Saidou Mahmoudou, Aurélien Macé, Victoria Harris, Michael Ramharter, Martin P Grobusch, Maria Yazdanbakhsh, B Leticia Fernandez-Carballo, Camille Escadafal, Peter G Kremsner, Sabine Dittrich, Selidji T Agnandji. Performance evaluation of a combination Plasmodium dual-antigen CRP rapid diagnostic test in Lambaréné, Gabon. *Infection*. PMID : 39177882
2. **Ayodele Alabi**, Mosarrof Hussain, Marie-Astrid Hoogerwerf, Christine Ndong Mengome, Moses Egesa, Emmanuella Driciru, Linda J. Wammes, Yvonne C. M. Kruize, Erliyani Sartono, Ayola Akim Adegnika, Peter G. Kremsner, Maria Yazdanbakhsh and Selidji Todagbe Agnandji. Establishing a controlled hookworm

human infection (CHHI) model for Africa: A report from the stakeholders meeting held in Lambaréné, Gabon, November 10–11, 2019. Archives of Public Health. PMID : 34225793

3. Selidji T Agnandji, Jeroen Bok\*, **Ayodele Alabi\***, Anita L Kabwende, Armel Mbouna, Juste Bie, Eleonne Moukiti, Albert Lalremruata, Meral Esen, Andrea Kreidenweiss, Natasha Kc, B Kim Lee Sim, Thomas L Richie, L W Preston Church, Matthew B B McCall, Stephen L Hoffman, Peter G Kremsner, Benjamin Mordmüller. Safety, tolerability, and protective efficacy of a radiation-attenuated, whole sporozoite malaria vaccine in children in Gabon: a randomised, double-blind, placebo-controlled, phase 2 trial. The Lancet Infectious Diseases. DOI: 10.1016/S1473-3099(25)00434-7. PMID : 40972633

4. **Ayodele Alabi**, B. Leticia Fernandez-Carballo, Louis G. Banda, Jose Moreira, Michele Atzeni, Camille Escadafal, Juste Christin Bie Ondo, Anita L Kabwende, Saidou Mahmoudou, Ross F Laidlaw, Steffen Geis, Christine Hoogland, Paulin N Essone, Sue J Lee, Aurelien Mace, Jullita Kenala Malava, Marguerite Massinga-Loembe, Stefano Ongarello, Peter G Kremsner, Andre Siqueira, Sabine Dittrich, Selidji T Agnandji. Bacterial and non-bacterial aetiology of acute febrile illness among outpatients using symptom-guided laboratory tests in Brazil, Gabon, and Malawi. Manuscript in preparation for submission.

5. **Ayodele Alabi**, Kossiwa Kokou, Christine Ndong, Eleonne Moukiti, Rhode Matsanga, Augustin Boueya, Eddy Mabicka, Yann Bakoukou, Juste Bie, Ross Laidlaw, Angela Diepen, Cornelis Hokke, Marie-Astrid Hoogerwerf, Yvonne Kruize, Peter Kremsner, Maria Yazdanbakhsh, Selidji Todaybe Agnandji. Controlled human Infection with *Necator americanus* larvae: outcomes from a phase 1 clinical trial in hookworm endemic Gabon. Manuscript in preparation for submission.

**Not included in this thesis:**

6. Bisola Olubiyi, **Ayodele Alabi** & Isaac Isiko. Field performance of the SD Bioline Malaria Ag P.f. rapid diagnostic test among children under five in Nigeria: insights from the 2021 Malaria Indicator Survey. Malaria Journal. PMID : 416807

7. Wolfram Mayr, Paulin E. Ndong, **Ayodele Alabi**, Lumeka A. Kabwende, Günter Weiss, Selidji T. Agnandji. Iron homeostasis and cytokine responses in Gabonese children with febrile illness. Communications medicine. PMID : 40696137

8. B Leticia Fernandez-Carballo, Michele Atzeni , Camille Escadafal, Martina Vettoretti, Steffen Geis, Selidji Todagbe Agnandji , Andre M Siqueira, Jullita Kenala Malava, Louis Banda, Anita L Kabwende, **Ayodele Alabi**, Juste Christin Bie Ondo, Marguerite Massinga-Loembe, Paulin N Essone, José Moreira, Aline da Rocha Matos, Braulia C Caetano, Marilda M Siqueira, Ana Maria Bispo de Filippis, Érica Aparecida Dos Santos Ribeiro da Silva, Maria Cristina S Lourenço, Julia Häring, Anna Günther, Meike Jakobi, Nicole Schneiderhan-Marra, Christine Hoogland, Patrícia Brasil, Sunil Pokharel, Stefano Ongarello, Victoria Harris, Aurélien Macé, Sue J Lee, Barbara Di Camillo, Sabine Dittrich. Cross-sectional evaluation of host biomarkers for guiding antibiotic use in bacterial and non-bacterial acute febrile illness in low- and middle-income tropical settings. *BMJ Open*. PMID : 39947818

7. Saskia Dede Davi, **Ayodele Alabi**, Lillian Rene Endamne, Teite Rebecca Hildebrandt, Anita Lumeka, Dearie Glory Okwu, Rella Zoleko-Manego, Ghyslain Mombo-Ngoma, Selidji Todagbe Agnandji, Michael Ramharter. Undiagnosed AIDS in a 13-year-old boy in rural Gabon. *IDCases*. PMID : 39524373

8. **Ayodele Alabi**, Kossiwa Kokou, Saidou Mahmoudou, Ranmali Kavishna, Sravya S Nakka, Sylvia Rothenberger, Fungai P Musangomunei, Bisola F Olubiyi, Juste C Bie-Ondo, Anita L Kabwende, Thirumalaisamy P Velavan ; VSV-EBOPUS Consortium ; Donata Medaglini, Helder I Nakaya, Olivier Engler, Ali M Harandi, Claire-Anne Siegrist, Peter G Kremsner, Selidji T Agnandji. Replication, safety and immunogenicity of the vectored Ebola vaccine rVSV-ΔG-ZEBOV-GP in a sub-Saharan African paediatric population: A randomised controlled, open-label trial in children aged 1-12 years living in Lambaréné, Gabon. *Journal of Infection*. PMID : 39121969

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10. Teite Rebecca Hildebrandt, Saskia Dede Davi, Anita Lumeka Kabwende, Lilian Rene Endamne, Esther Mehmehl, Maximilian Rakotonirinalalao, **Ayodele Alabi**, Rella Zoleko Manego, Peter G. Kremsner, Bertrand Lell, Ayôla Akim Adegnika, Ghyslain

Mombo-Ngoma, Johannes Mischlinger, Selidji Todagbe Agnandji, Michael Ramharter. Evaluation of knowledge, attitude and practices towards loiasis in the rural community of Sindara, in central African Gabon. PLoS Negl Trop Dis. PMID: 38781277

11. **Ayodele Alabi**, Kossiwa Kokou, Selidji T. Agnandji. PA-475 Transmission of a replication-competent vector rVSV-ZEBOV Ebola vaccine: a phase 2 trial. BMJ Glob Health. <https://doi.org/10.1136/bmjgh-2023-EDC.213>

12. Saskia Dede Davi, Dearie Glory Okwu, Marc Luetgehetmann, Frederique Mbang Abba, Martin Aepfelbacher, Lillian Rene Endamne, **Ayodele Alabi**, Rella Zoleko-Manego, Ghyslain Mombo-Ngoma, Saidou Mahmoudou, Marylyn Martina Addo, Michael Ramharter & Johannes Mischlinger. Epidemiology of co-infections in pregnant women living with human immunodeficiency virus 1 in rural Gabon: a cross-sectional study. Infectious Diseases of Poverty. PMID : 37408012.

13. Moses Egesa, Davis Kiberu, Richard E Sanya, **Ayodele Alabi**, Friederike Sonnet, Jan Pieter R Koopman, Joseph Baruch Baluku, David W Oguttu, Emmanuella Driciru, Matthew Odongo, Bridgious Walusimbi, Alison M Elliott, Gyaviira Nkurunungi. Uganda Schistosomiasis Symposium 2023: understanding morbidity drivers and developing controlled human infection models for vaccine research. Trends in Parasitology. PMID : 37032215.

14. Paulin N. Essone, Bayode R. Adegbite, Marien J.M. Mbadinga, Armel V. Mbouna, Fabrice Lotola-Mougeni, **Ayodele Alabi**, Jean R. Edoa, Bertrand Lell, Abraham S. Alabi, Ayola A. Adegnika, Michael Ramharter, Joel F.D. Siawaya, Martin P. Grobusch, Peter G. Kremsner, Selidji T. Agnandji. Creatine kinase-(MB) and hepcidin as candidate biomarkers for early diagnosis of pulmonary tuberculosis: a proof-of-concept study in Lambaréné, Gabon. Infection. PMID : 35133607.

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## Curriculum Vitae

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Ayodele Alabi was born on the 9<sup>th</sup> of August 1991, in Lagos, Nigeria. At the age of six, his parents moved with him to The Gambia. A persistent bowing of his legs as a young child, led to a chance conversation with a researcher at the Medical Research Council (MRC) in Fajara, The Gambia, which culminated in a successful surgical intervention in Dakar, Senegal. His surgery was largely funded by resources provided by researchers at the MRC Gambia. These early life experiences have influenced a third culture individual with high adaptability and an African worldview. They would also influence a eureka moment in his teenage years, during his secondary school studies at the West African International School in The Gambia, that affirmed his decision to pursue medical studies at university.

He obtained his Doctor of Medicine (MD) degree from the University of Medicine and Pharmacy of Craiova, Romania, in 2018, where he was given an award of excellence for outstanding performance and lasting contribution to the faculty of medicine. After graduating, he began his experience with the Centre de Recherches Médicales de Lambaréné (CERMEL), also in 2018, working in the research group of Prof. Selidji Agnandji.

In 2020, he was accepted into the PhD program at the LUMC, funded by a grant from the NWO- WOTRO Science for Global Development, and later by CERMEL via the European and Developing Countries Clinical Trials Partnership. In 2022, he became the clinical lead of the biomedical and social sciences research group at CERMEL. As part of his role, he leads and supervises the design of epidemiological studies, phase I-III clinical trials, and a controlled human infection model at CERMEL. Upon completing his PhD, he will begin a postdoctoral clinical fellowship at the Francis Crick Institute (the Crick) in London, the United Kingdom. His fellowship is co-funded by the Crick and the Rosetrees Trust. He plans to continue working on translationally impactful global health research, with focus on elucidating clinical and immune profiles within the African continent, and vaccine development.

## Acknowledgements

I acknowledge the wonderful people that have contributed to my PhD journey, illustrating the uniqueness of each individual, by using an optical illusion that has fascinated me since the day I first saw one- a rainbow. Sunlight is made up of all the colours of the rainbow, and this is revealed when it is reflected by raindrops in the sky. Each colour is reflected differently, by each raindrop, along the spectrum we observe. Firstly, the rainbow that we see is the result of billions of droplets working together to create a masterpiece. Secondly, there is never just one rainbow, as our eyes are so small and only see the light that reaches them i.e. the rainbow seen by the left eye is different to the one seen by the right; indeed, every rainbow is unique to you, the observer. Thirdly, sunlight is reflected more than once in each droplet, and this forms a second rainbow (a double rainbow), which we can sometimes spot if we are lucky enough. The second rainbow will not be as bright as the first; it is rarely seen but it is always there- behind every bright individual, there are always other people, beside them, supporting them, even though these people may be out of sight.

Every rainbow is unique, and no rainbow is alone.

I give my warmest appreciation to my promotor, Professor Selidji Todagbe Agnandji, who gave me a golden opportunity. Thank you for inspiring my interest in the development of innovative medical research at CERMEL, and polishing my perspectives, originality, and independent thinking. Your poise is something I will always admire.

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Amana, Christine, Eddy, Augustin, Saskia, Laura, Dearie, Chiara, Jamaal, Fabrice, Roseline, Elodie, Dani, Audrey, Ma Bea, Lois, Prince, Esther, Edith, Imelda, Gaylord, Fallowne, Linda, Igor, Anthony, Yann, Valerie, Christina, Horphe, Glorieuse, Serge, Levie, Jonas, Wolfram, Eva, Marla, Arnault, Sidonie, Ulrich, Isaac, Matthew, Rafiou, Bryan, Jean-Roger (of blessed memory), Romeo, Jeannot, Jean-Claude, Ronald, Wilfrid, Alex, Christian, Anick, Flamand, Rella, nurses, coordinators, lab, field-work, technical team members, and all staff I work, eat, joke, and dance with; thank you for every moment.

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## Supplementary

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