OMB No. 0925-0001 and 0925-0002 (Rev. 10/2021 Approved Through 09/30/2024)

BIOGRAPHICAL SKETCH

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NAME: **MUHAMMAD BAKARI KAMBI**

eRA COMMONS USER NAME (credential, e.g., agency login): **MBAKARIKAMBI**

POSITION TITLE: **PROFESSOR**, Department of Internal Medicine, MUHAS - Tanzania

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| **University of Dar-es-salaam (UDSM), Tanzania** | **MD** | **12/1988** | **Basic Medical Degree** |
| **University of Dar-es-salaam (UDSM), Tanzania** | **MMed** | **12/1993** | **Internal Medicine** |
| **Karolinska Institutet (KI), Sweden** | **PhD** | **05/2006** | **Natural History of HIV and preparations for HIV vaccine Trials** |

1. **Personal Statement**

I am currently afull Professor in Internal Medicine at the Muhimbili University of Health and Allied Sciences (MUHAS) responsible for Teaching, offering Clinical care at the Muhimbili National Hospital, as well as conducting Research. I have supervised a number of Masters and PhD students, and am currently mentoring two Post-doc fellows. I have a wide experience in national, regional and international research collaboration through various research and training programs.

I would like to highlight the ongoing NIH-funded project to which I am the Co-PI: D43TW009775, from 05/01/2022–04/30/2027. It is titled “Training Tanzanian Researchers for HIV/AIDS Implementation Science” abbreviated as “HIS Project”.

In the past I have led the TANSWED-HIV program (funded by Sida), the DAR-DAR Health program (funded by NIH), the TaMoVac trials (funded by EDCTP, Sida), and the PrEPVacc trial (funded by EDCTP).

I have also served in various administrative positions at MUHAS as well as the Ministry of Health.

**B. Positions, Scientific Appointments, and Honors**

 **Positions and Scientific Appointment**

|  |  |
| --- | --- |
| 2022 - todate | Co-Principal Investigator, HIV Implementation Science (HIS) Training program at MUHAS |
| 2021 | Member, Special Technical Committee to advise the President of Tanzania on COVID-19 |
| 2020 - todate | Senior Study Advisor, PrEPVacc Trial |
| 2017 - 2020 | Alternate Member, WHO Executive Board |
| 2015 - 2020 | Chief Medical Officer - Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) Tanzania |
| 2015 - todate | Professor at MUHAS |
| 2011 - 2015 | Deputy Vice Chancellor (DVC) at MUHAS |
| 2010 - 2015 | Associate Professor at MUHAS |
| 2009 | Principal Investigator at MUHAS, TaMoVac-II trial  |
| 2009 | Sub-programme Coordinator and PI of Sida funded HIV/TB Sub-programme |
| 2008 | Overall Coordinator and Principal Investigator at MUHAS, TaMoVac-01 trial |
| 2007 - 2011 | Associate Dean, School of Medicine, MUHAS |
| 2007  | Study Director, HIVIS Project  |
| 2002 | Study Director, DAR-DAR Health Project (TB Vaccine Trial) |
| 2002 - 2010 | Senior Lecturer at MUHAS |
| 1994 - 2002 | Lecturer at MUCHS of UDSM |

**Honors**

|  |  |
| --- | --- |
| 2021 | Proclamation of Appreciation by the Private Hospitals Advisory Board (PHAB) of the Ministry of Health, Community Development, Gender, Elderly and Children – Dodoma, Tanzania |
| 2021 | The 2021 Health Promotion Award by the MoHCDGEC – Dodoma, Tanzania. |
| 2019 | The Leadership Award by the East African Health Research Commission (EAHRC) – Dar es Salaam, Tanzania. |
| 2016 | Fellow, Association of Physicians of East, Central and Southern Africa College of Physicians (ECSACOP) |
| 1993 | MMC Prize - Best Final Year MMed Student in Internal Medicine |
| 1988 | University Prize, Best Final year student in MD degree, UDSM |
| 1985 | Microbiology/Immunology Prize - (Best 2nd Year Student in Microbiology/Immunology) |
| 1984 | Vice Chancellor’s Prize - Best Student in 1st Year MD Degree Examination |

**C. Contributions to Science**

*Below is a list of on-going and past Research Grants:*

1. 2022. Training Tanzanian Researchers for HIV/AIDS Implementation Science (HIS). Funded by NIH.
2. 2022. Immunogenicity following administration of COVID-19 Vaccines in Tanzania. Funded by the Ministry of Health, Tanzania.
3. 2021. A Phase IIb three-arm, two-stage HIV prophylactic vaccine trial with a second randomisation to compare TAF/FTC to TDF/FTC as pre-exposure prophylaxis (PrEPVacc). Funded EDCTP.
4. 2015 to 2022. Development of an HIV negative Registration Cohort for Future Participation in an HIV Vaccine Study. Funded EDCTP.
5. 2009. HIV/TB Sub-programme in the Health Research and Training towards Poverty Reduction in Tanzania Sub-Programme, containing a Project titled “Studies of cohorts for HIV vaccine trials and HIV vaccine evaluation in youths in Tanzania” Funded by the Swedish International Development Agency (Sida).
6. 2008. TaMoVac I Project: CT\_2006\_33111\_007 “HIV vaccine trial capacity building in Tanzania and Mozambique by continued exploration of optimal DNA priming and MVA boosting strategies”. Funded by EDCTP.
7. 2009. TaMoVaC II Project. IP 07 33112001. HIV Vaccine trial capacity building in Tanzania and Mozambique by continued exploration of optimal DNA and MVA boosting strategies: Funded by European and Developing Countries Clinical Trials Partnership (EDCTP).
8. 2007. HIVIS Project: A Phase I/II trial to assess the Safety and Immunogenicity of a plasmid DNA-MVA prime boost HIV-1 vaccine candidate among volunteers in Dar es Salaam, Tanzania. Funded by the Swedish Embassy in Tanzania.
9. 2002. Dar-Dar Health Project: Disseminated TB in HIV Infection: Epidemiology and Prevention (through an efficacy trial of *M vaccae* vaccine in Dar es Salaam). Funded by the National Institutes of Health (NIH)

*My contribution to science includes research on the different aspects of HIV and TB as shown in the following abbreviated list of relevant publications:*

1. Chillo P, Muhihi A, Danaei G, **Bakari M**, Kwesigabo G, Njelekela M, Ulenga N, Fawzi WW, Mugusi F, Sudfeld CR. *Sociodemographic and Clinical Predictors of Weight Gain During the First Year of Antiretroviral Therapy among Adults Living With HIV in Urban Tanzania*. **J Int Assoc Provid AIDS Care. 2024 Jan-Dec;23:23259582241281010. doi: 10.1177/23259582241281010. PMID: 39360426.**
2. Bwire G, Nyondo GG, Njiro BJ, Aiko BG, Mikomangwa WP, Manguzu AM, August F, Myemba DT, Magati R, Chillo P, Mugusi F, **Bakari M**, Sudfeld CR, Sangeda RZ, Killewo J. *Implementing Evidence-Based Interventions in HIV Programs in Sub-Saharan Africa Using the Implementation Research Approach: A Mixed-Methods Systematic Review*". **Reviews in Medical Virology.**
3. Sambayi GL, Bwire GM, Kilapilo MS, Myemba DT, Mosha IH, Kilonzi M, Magati RB, Amour M, Mwakalukwa R, Mangara AN, **Bakari M**, Sudfeld CR, Matee MIN, Sangeda RZ, Adams LV, Killewo J. *Barriers and Enablers to Retention in HIV Care and Adherence to Antiretroviral Therapy: Evidence from Dar es Salaam, Tanzania*. **HIV/AIDS (Auckl). 2024 Jul 26;16:301-311. doi: 10.2147/HIV.S458545. eCollection 2024. PMID: 39081498**
4. **Bakari M**, Aboud S, Kasubi M, Mmbando BP, Ntinginya NE, Sichalwe A, Ubuguyu OS, Magesa A, Rutananukwa NL, Nyawale H, et al. *Humoral Immune Responses following COVID-19 Vaccinations among Adults in Tanzania*. **Vaccines (Basel). 2023 Dec 23; 12(1):22.** [**https://doi.org/10.3390/vaccines12010022**](https://doi.org/10.3390/vaccines12010022)**. PMID:38250835; PMCID: PMC 10819524**
5. Bwire GM, Njiro BJ, Ndumwa HP, Munishi CG, Mpondo BC, Mganga M, Mang'ombe E, **Bakari M,** Sangeda RZ, Sudfeld CR, Killewo J. *Impact of differentiated service delivery models on retention in HIV care and viral suppression among people living with HIV in sub-Saharan Africa: A systematic review and meta-analysis of randomised controlled trials*. **Rev Med Virol. 2023 Sep 1:e2479. doi: 10.1002/rmv.2479. Epub ahead of print. PMID: 37655428.**
6. Tarimo EAM, Ambikile J, Munseri P, **Bakari M** (2022). *Personal experiences following acquiring HIV infection while volunteering in Phase I/II HIV vaccine trials: A qualitative study from Tanzania*. **PLoS ONE 17(10): e0276404. https://doi. org/10.1371/journal.pone.0276404**
7. Faini D, Msafiri F, Munseri P, **Bakari M**, Lyamuya E, Sandström E, Biberfeld G, Nilsson C, Hanson C, Aboud S. *The prevalence, incidence and risk factors for HIV among female sex workers - a cohort being prepared for a phase IIb HIV vaccine trial in Dar es Salaam, Tanzania*. **J Acquir Immune Defic Syndr. 2022 Sep 20.**
8. Joachim A, Msafiri F, Onkar S, Munseri P, Aboud S, Lyamuya EF, **Bakari M**, Billings E, Robb ML, Wahren B, Mhalu FS, Sandström E, Rao M, Nilsson C, Biberfeld G. *Frequent and Durable anti-HIV Envelope VIV2 IgG Responses Induced by HIV-1 DNA Priming and HIV-MVA Boosting in Healthy Tanzanian Volunteers*. **Vaccines (Basel)**. **2020 Nov 13;8(4)**
9. Msafiri F, Joachim A, Held K, Nadai Y, Chissumba RM, Geldmacher C, Aboud S, Stöhr W, Viegas E, Kroidl A, **Bakari M**, Munseri PJ, Wahren B, Sandström E, Robb ML, McCormack S, Joseph S, Jani I, Ferrari G, Rao M, Biberfeld G, Lyamuya E, Nilsson C. *Frequent anti-V1V2 Responses Induced by HIV-DNA Followed by HIV-MVA with or without CN54rgp140/GLA-AF in Healthy African Volunteers.* **Microorganisms 2020 Nov 4;8(11)**
10. Joachim A, Ahmed MIM, Pollakis G, Rogers L, Hoffmann SF, Munseri P, Aboud S, Lyamuya F, Bakari M, Robb ML, Wahren B, Sandstrom E, Nilsson C, Biberfeld G, Geldmacher C and Held C. *Induction of Identical IgG HIV-1 Envelope Epitope Recognition Patterns After Initial HIVIS-DNA/MVA-CMDR Immunization and a Late MVA-CMDR Boost*. Front Immunol. 2020 Apr 28; 11: 719.
11. Mbunda T, Tarimo EAM, Bakari M, Sandström E, Kulane A. *Recruitment using respondent driven sampling, risk behaviors assessment and willingness of young female sex workers (18-25 years) in Dar Es Salaam, Tanzania to participate in HIV vaccine trials*. BMC Public Health. 2019 Nov 20;19(1):1537.
12. Tarimo EAM, Ambikile J, Munseri P, Bakari M. *Perception of potential harm and benefits of HIV vaccine trial participation: A qualitative study from urban Tanzania*. PLoS One. 2019 Nov 8;14(11):e0224831.
13. Nadai Y, Held K, Joseph S, Ahmed MIM, Hoffmann VS, Peterhoff D, Missanga M, Bauer A, Joachim A, Reimer U, Zerweck J, McCormack S, Cope AV, Tatoud R, Shattock RJ, Robb ML, Sandstroem EG, Hoelscher M, Maboko L, **Bakari M**, Kroidl A, Wagner R, Weber J, Pollakis G, Geldmacher C. *Envelope-Specific Recognition Patterns of HIV Vaccine-Induced IgG Antibodies Are Linked to Immunogen Structure and Sequence.* **Front Immunol. 2019 Apr 24;10:717.**
14. Viegas EO, Kroidl A, Munseri PJ, Missanga M, Nilsson C, Tembe N, Bauer A, Joachim A, Joseph S, Mann P, Geldmacher C, Fleck S, Stohr W, Scarlatti G, Aboud S, **Bakari M**, Maboko L, Hoelscher M, Wahren B, Robb ML, Weber J, McCormack S, Biberfeld G, Jani IV, Sandstrom E, Lyamuya E; TaMoVac study group. *Optimizing the immunogenicity of HIV prime-boost DNA-MVA-rgp 140/GLA vaccines in a phase II randomized factorial trial design*. **PloS One. 2018 Nov 29;13(11)**
15. Magohe A, Mackenzie T, Kimario J, Lukmanji Z, Hendricks K, Koethe J, Neke NM, Tvaroha S, Connor R, Waddell R, Maro I, Matee M, Pallangyo K, **Bakari M**, von Reyn CF. *Pre- and post-natal macronutrient supplementation for HIV-positive women in Tanzania: Effects on infant birth weight and HIV transmission; DarDar-2 Study Team*. **PLoS One. 2018 Oct 11;13(10).**
16. Bauer A, Podola L, Mann P, Missanga M, Haule A, Sudi L, Nilsson C, Kaluwa B, Lueer C, Mwakatima M, Munseri PJ, Maboko L, Robb ML, Tovanabutra S, Kijak G, Marovich M, McCormack S, Joseph S, Lyamuya E, Wahren B, Sandström E, Biberfeld G, Hoelscher M, **Bakari M**, Kroidl A, Geldmacher C. *Preferential Targeting of Conserved Gag Regions after Vaccination with a Heterologous DNA prime - Modified Vaccinia Ankara (MVA) boost HIV-1 vaccine regimen.* **J Virol. 2017 Jul 12. pii: JVI.00730-17.**
17. Joachim A, Munseri PJ, Nilsson C, **Bakari M**, Aboud S, Lyamuya EF, Tecleab T, Liakina V, Scarlatti G, Robb ML, Earl PL, Moss B, Wahren B, Mhalu F, Ferrari G, Sandstrom E, Biberfeld G. *Three-Year Durability of Immune Responses Induced by HIV-DNA and HIV-Modified Vaccinia Virus Ankara and Effect of a Late HIV-Modified Vaccinia Virus Ankara Boost in Tanzanian Volunteers*. **AIDS Res Hum Retroviruses. 2017 Jan 27.**
18. Joachim A, Bauer A, Joseph S, Geldmacher C, Munseri PJ, Aboud S, Missanga M, Mann P, Wahren B, Ferrari G, Polonis VR, Robb ML, Weber J, Tatoud R, Maboko L, Hoelscher M, Lyamuya EF, Biberfeld G, Sandström E, Kroidl A, **Bakari M**, Nilsson C, McCormack S. *Boosting with Subtype C CN54rgp140 Protein Adjuvanted with Glucopyranosyl Lipid Adjuvant after Priming with HIV-DNA and HIV-MVA is safe and enhances Immune Responses: A Phase I Trial*. **PLoS One. 2016 May 18;11(5).**
19. Tarimo EAM, **Bakari M**, Kakoko DCV, Kohi TW, Mhalu F, Sandstrom E, Kulane A. *Motivations to participate in a Phase I/II HIV vaccine trial: A descriptive study from Dar es Salaam, Tanzania.* **BMC Public Health (2016) 16:182 DOI 10.1186/s12889-016-2875-6**
20. Munseri PJ, Kroidl A, Nilsson C, Joachim A, Geldmacher C, Mann P, Moshiro C, Aboud S, Lyamuya E, Maboko L, Missanga M, Kaluwa B, Mfinanga S, Podola L, Bauer A, Godoy-Ramirez K, Marovich M, Moss B, Hoelscher M, Gotch F, Stöhr W, Stout R, McCormack S, Wahren B, Mhalu F, Robb ML, Biberfeld G, Sandström E, **Bakari M**. *Priming with a Simplified Intradermal HIV-1 DNA Vaccine Regimen followed by Boosting with Recombinant HIV-1 MVA Vaccine is Safe and Immunogenic: A Phase IIa Randomized Clinical Trial*. **PLoS One. 2015 Apr 15;10(4):e0119629. doi: 10.1371/journal.pone.0119629. eCollection 2015**.
21. Joachim A, Nilsson C, Aboud S, **Bakari M**, Lyamuya EF, Robb ML, Marovich MA, Earl P, Moss B, Ochsenbauer C, Wahren B, Mhalu F, Sandström E, Biberfeld G, Ferrari G, Polonis VR. *Potent Functional Antibody Responses Elicited by HIV-I DNA Priming and Boosting with Heterologous HIV-1 Recombinant MVA in Healthy Tanzanian Adults*. **PLoS One. 2015 Apr 14;10(4):**

1. Mbunda T, **Bakari M**, Tarimo E, Sandstrom E, Kulane. A. *Factors that Influence the Willingness of Young Adults to Participate in Early Vaccine Trials and Contraceptive Practices in Dar es Salaam, Tanzania*. **AIDS Res Hum Retroviruses**. **2014 Oct;30 Suppl 1:A247.**
2. Joachim A, Bauer A, Joseph S, Geldmacher C, Nilsson C, Munseri P, Missanga M, Mann P, Aboud S, Sudi L, Mviombo P, Haule A, Wahren B, Ferari G, Polonis V, Robb M, Tatoud R, Maboko L, Lyamuya EF, Hoelscher M, **Bakari M**, Biberfeldt G, Sandstrom E, Kroidl A, Cormack SM. *Immune Responses after Two Immunizations with rgp140/GLA Following Priming with HIV-DNA and HIV-MVA in Healthy Tanzanian Volunteers.* **AIDS Res Hum Retroviruses. 2014 Oct;30 Suppl 1:A188-9.**
3. Tarimo EA, Munseri P, Aboud S, **Bakari** M, Mhalu F, Sandstrom E. *Experiences of Social Harm and Changes in Sexual Practices among Volunteers Who Had Completed a Phase I/II HIV Vaccine Trial Employing HIV-1 DNA Priming and HIV-1 MVA Boosting in Dar es Salaam, Tanzania.* **PLoS One. 2014 Mar 6;9(3):e90938.**
4. Mbunda T, **Bakari** M, Tarimo EA, Sandstrom E, Kulane **A.** *Factors that influence the willingness of young adults in Dar es Salaam, Tanzania, to participate in phase I/II HIV vaccine trials*. **Glob Health Action. 2014 Feb 25;7:22853.**
5. **Bakari M**, Munseri P, Francis J, Aris E, Moshiro C, Siyame D, Janabi M, Ngatoluwa M, Aboud S, Lyamuya E, Sandström E, Mhalu F. *Experiences on recruitment and retention of volunteers in the first HIV vaccine trial in Dar es Salam, Tanzania - the phase I/II HIVIS 03 trial*. **BMC Public Health. 2013 Dec 9;13:1149. doi: 10.1186/1471-2458-13-1149**
6. von Reyn CF, **Bakari M**, Arbeit RD, Lahey T, Ramadhani A, Egwaga S. *New Vaccines for the prevention of Tuberculosis in Human Immunodeficiency Virus infection.* **Int J Tuberc Lung Dis. 2012**
7. **Bakari M**, Aboud S, Nilsson C, Francis J, Buma D, Moshiro C, Aris EA, Lyamuya EF, Janabi M, Godoy-Ramirez K, Joachim A, Polonis VR, Bråve A, Earl P, Robb M, Marovich M, Wahren B, Pallangyo K, Biberfeld G, Mhalu F, Sandström E. *Broad and potent immune responses to a low dose intradermal HIV-1 DNA boosted with HIV-1 recombinant MVA among healthy adults in Tanzania*. **Vaccine (2011), 29:8417-8428.**
8. von Reyn CF, Mtei L, Arbeit RD, Waddell R, Cole B, Mackenzie T, Matee M, **Bakari M**, Tvaroha S, Adams LV, Mark Carey, Todd Mackenzie, Wendy- Wieland Alter, Hanna Soini, C. Robert Horsburgh CR, Kisali Pallangyo K; *The DarDar Study Group.Prevention of tuberculosis in Bacille Calmette-Guerin-primed, HIV-infected adults boosted with an inactivated whole cell mycobacterial vaccine.* **AIDS. 2010 Mar 13;24(5):675-85.**
9. E Sandström, C Nilsson, B Hejdeman, A Bråve, G Bratt, M Robb, J Cox, T VanCott, M Marovich, R Stout, S Aboud, **M Bakari**, K Pallangyo, B Moss, P Earl, N Michael, D Birx, F Mhalu, B Wahren, G Biberfeld, et al. *Broad immunogenicity of a multigene, multiclade HIV-1 DNA vaccine boosted with heterologous HIV-1 recombinant Modified Vaccinia virus Ankara*. **J Infect Dis. 2008 Nov 15; 198(10):1482-90.**
10. Lillian Mtei, Mecky Matee, Oliver Herfort, **Muhammad Bakari**, C. Robert Horsburgh, Richard Waddell, Bernard Cole, Jenni M. Vuola, Susan Tvaroha, Barry Kreiswirth, Kisali Pallangyo, and C. Fordham von Reyn. *High rates of clinical and subclinical tuberculosis among HIV-positive ambulatory subjects in Tanzania*. **Clinical Infectious Diseases 2005; 40:1500-7**

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