
DR. SAHAR MUBARAK BAKHIET MOHAMMED

Head Department of Molecular Biology

Coordinator of the Diploma/M.Sc. degree in Molecular Medicine

Institute of Endemic Diseases (IEND) - University of Khartoum

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PERSONAL INFORMATION

Name: Sahar Mubarak Bakhiet Mohammed

Date of Birth: 9th April 1976.

Place of Birth: Omdurman - Sudan

Nationality: Sudanese

Sex: Female

Marital status: widow (has one child)

Current Working Address: Institute of Endemic Diseases, Medical Campus

University of Khartoum, P.O Box 102, Post Code 11111, Qassr Street, Khartoum, Sudan.

E-Mail: Saharbakhiet@iend.org – Sahar.bakhite@uofk.edu

- Saharbakh@gmail.com

Languages: English Fluent / Arabic (Mother Tongue)

Academic Qualifications

2007-2008

Postdoctoral Fellowship in Immunology from WHO/TDR- Faculty of Biology and Medicine
Department of Biochemistry. University of Lausanne-Switzerland

2003-2007

PhD Molecular Biology, Institute of Endemic Diseases - University of Khartoum.

2001-2003

M.Sc. of Molecular Biology-Institute of Endemic Diseases - University of Khartoum

1995-2000

B.V.M, Bachelor of Veterinary Medicine - University of Khartoum.

Research Interests:

1. Immunology and Molecular Biology of neglected disease with special emphasis on Leishmaniasis and Mycetoma
2. Host-pathogen interaction.
3. Biomarkers and diagnostics.
4. Metagenomic studies
5. Genetic susceptibility to Mycetoma

TEACHING EXPERIENCES:

1. **2001 – 2003** Teaching Assistant of Molecular Biology courses and practicals for pre-master medical laboratory qualifying year, Institute of Endemic Diseases- University of Khartoum.
2. **2007-2011** Teaching Basic and advanced Immunology and Immuno-Techniques- Alneelen University – Faculty of medical laboratories
3. **2011 up to now** Teaching Molecular Biology for M.Sc. students of Molecular Medicine, Institute of Endemic Diseases, University of Khartoum.
4. **2011 up to now** Teaching Recombinant DNA technology for M.Sc students of Molecular Medicine, Institute of Endemic Diseases, University of Khartoum.
5. **2015-2017** Bioinformatics courses – Alazhari University Faculty of Medical Laboratories
6. **2015 up to now** Diagnostic molecular parasitology - Institute of Endemic Diseases.
7. **2016 up to now** Bioinformatics course – M.Sc. students of Molecular Medicine, Institute of Endemic Diseases, and University of Khartoum.

PARTICIPATION IN SCIENTIFIC CONFERENCES, MEETINGS & WORKSHOPS:

1. Regional Training Course on Bioinformatics Applied to Tropical Diseases in Africa.- South African National Bioinformatics Institute University of the Western Cape. Cape town, South Africa 2004
2. Advanced Regional Training Programme in Bioinformatics.- Muscat, Oman, December 2005

3. The advanced WHO/TDR course on Immunology, Vaccinology and Biotechnology Applied To Infectious Diseases, - Lausanne University, Switzerland, 6/9-21/10/2006
4. Molecular Medicine and Genomics in Africa (ICGEB).- Khartoum - Sudan 19-24 January 2008.
5. The Winter Course of Life Science on Immunology, Al- Neelain University – Sudan, 5-10 January 2008.
6. Afro-Immunoassay project-2 workshop- Standardization of Immunoassay and Introductory Statistics.- Noguchi Memorial Institute for Medical Research Accra, Ghana July 2008
7. National training course on the use of stable isotope techniques in nutrition, Apr 7 7 2008. Institute of Endemic Diseases – Khartoum, Sudan
8. "Neglected Tropical Diseases: Hidden Successes, Emerging Opportunities."
9. International Conference in the framework of a European Foundations Initiative Bamako, Mali Rodolphe Mérieux Laboratory, Mali, 25-27 September 2008.
10. Khartoum Winter School of Bioinformatics and Statistical Genetics, 4-9 January 2009. Institute of Endemic Diseases, Khartoum - Sudan
11. Sudanese Academy of Young Scientists (SAYS). First conference.- Nile College, Khartoum, Sudan. February 2009
12. EDCTP/IANPHI Grant Writing & Grant Management Workshop, Kampala, Uganda. Mar 30 April 2009
13. GCLP in VL Laboratories, WHO/TDR, 18- 21 August 2009, Khartoum-Sudan.
14. Training program on GCLP for Laboratory technicians, Supervisors and managers (co-facilitator), Buea-Cameroon, organized by WHO/TDR, 11-16 January 2010
15. Theoretical Course "Molecular Medicine and Genomics in Africa", Zanzibar, Tanzania. 28-31 January 2010.

16. Training program on GCLP for Laboratory technicians, Supervisors and managers (co-facilitator), Ankara-Turkey, WHO/TDR, December 2011.
17. Theoretical Course "Molecular Medicine and Genomics in Africa", Zanzibar, Tanzania. 28-31 January 2010.
18. TDR/RSG Proposal Development Workshop for Potential Research Strengthening Group Grantees, 21-24 September 2009, Abuja, Nigeria
19. ISHAM congress 2018, Amsterdam, The Netherlands.
20. NNN meeting, Addis Abba, Ethiopia, 24-26th September 2018
21. The First International Podoconiosis conference, Addis Ababa, Ethiopia, 2018
22. Good Financial Practice (GFP) training workshop at Nairobi, Kenya, DNDi, Africa, 26-27th July 2018

RESEARCH PROJECTS AND GRANTS:

- A co-investigator in the Project: African immunoassay (AIA). Amanet network for evaluation of malaria candidates. 2007- 2009
- A principle investigator: Monitoring of anti Leishmania antibody responses for early diagnosis and prognosis of Visceral Leishmaniasis 2008-2010. (Funded by Ministry of Higher Education, Sudan).
- Co-investigator: Occult hepatitis B virus infection and reactivation in Africans in the context of the human immunodeficiency virus pandemic .(2011-up to now) funded by DFG
- A Principal investigator: The Immune Responses and Genetic Background of *Madurella Mycetomatis* Eumycetoma, Sudan.2015.
- Co-investigator: Development and evaluation of new diagnostic tests for Visceral Leishmaniasis. Foundation for Innovative new Diagnostics (FIND). 2014-2015

- Co-investigator: Characterization of TB clinical trial site in eastern Sudan. EDCTP
- Co-investigator: Novel diagnostic tool for mycetoma, 2016, Ministry of Higher Education Grant, 2017-2018
- Principle investigator: Mapping the geographical distribution of Mycetoma and Implementation study to test Mycetoma program expansion strategy". WHO/ TDR-SGS 16 - 13 ".2016-2017
- Co-investigator NIHR Global Health Research Unit on Neglected Tropical Diseases at Brighton and Sussex Medical School (Phase 2). Award ID:NIHR131996 . 2021- up to now

SUPERVISION AND TRAINING:

- Supervision of 10 MSc students by research / 30 Msc dissertation (by courses) .
- Supervision of 5 PhD students (co-supervisor).

PUBLICATIONS, PRESENTATIONS AND POSTERS:

1. *Al Dawi AF, Mustafa MI, Fahal AH, EL Hassan AM, **Bakhiet SM**, Mahgoub ES, Mergani A, Mukhtar MM. The Association of HLA-DRB1 & HLA-DQB1 and the occurrence of Eumycetoma. Khartoum Med J. 2013; 6(3): 923 - 929*
2. ***Bakhiet SM**, Fahal AH, Musa AM, Mohamed ELSW, Omer RF, Ahmed ES, El Nour M, Mustafa ERM, Sheikh A Rahman ME, Suliman SH, El Mamoun MAG,*

- El Amin HM. A holistic approach to the mycetoma management. PLoS Negl Trop Dis. 2018; 12(5):e0006391. <https://doi.org/10.1371/journal.pntd.0006391>*
3. **Bakhiet SM**, Emmanuel Edwar Siddig, Omnia Babekir Abdallah, EL Samani Wadaa Mohamed, Ahmed Hassan Fahal. Fine Needle Aspiration Cytology Utility in the Identification of Mycetoma Causative Agents: The Mycetoma Research Center Experience. *Khartoum Med J.* 2018; 11(0): 1499 – 1506.
 4. **Bakhiet SM**, Samani Wadaa Mohamed, Najwa A Mhmoud, Emmanuel Edwar Siddig, El, Dania Mohammed Ibrahim, Eiman Siddig Ahmed, Ahmed Hassan Fahal. *Madurella mycetomatis* causing Multiple mycetoma lesions: A rare presentation. *Khartoum Med J.* 2018; 11(0): 1499 – 1506.
 5. Suleiman Hussein Suleiman, Abubaker Ahmed Yosif, **Bakhiet SM**, Ahmed Hassan Fahal. Massive progressive scroto-perineal eumycetoma and its therapeutic challenges. *Khartoum Med J.* 2019; 12(2): 1622 - 1627
 6. Mhmoud NA, Santona A, Fiamma M, Siddig EE, Deligios M, **Bakhiet SM**, et al. *Chaetomium atrobrunneum* causing human eumycetoma: The first report. *PLoS Negl Trop Dis.* 2019; 13(5): e0007276. <https://doi.org/10.1371/journal.pntd.0007276>
 7. Siddig EE, Mohammed Edris AM, **Bakhiet SM**, van de Sande WWJ, Fahal AH. Interleukin-17 and matrix metalloprotease-9 expression in the mycetoma

- granuloma. *PLoS Negl Trop Dis.* 2019; 13(7): e0007351. <https://doi.org/10.1371/journal.pntd.0007351>
8. Siddig EE, Mhmoud NA, **Bakhiet SM**, Abdallah OB, Mekki SO, El Dawi NI, Van de Sande W, Fahal AH. The Accuracy of Histopathological and Cytopathological Techniques in the Identification of the Mycetoma Causative Agents. *PLoS Negl Trop Dis.* 2019 Aug 29;13(8): e0007056. doi: 10.1371/journal.pntd.0007056. [Epub ahead of print]
 9. Hussein HS, **Bakhiet SM**, Fahal AH. The late presentation of mycetoma patients: the challenges. *Khartoum Med J.* 2018; 13(01): 1681 – 1687.
 10. Ali RS, Newport MJ, **Bakhiet SM**, Ibrahim ME, Fahal AH. Host genetic susceptibility to mycetoma. *PLoS Negl Trop Dis.* 2020; 14(4): e0008053. <https://doi.org/10.1371/journal.pntd.0008053>.
 11. Siddig EE, Ahmed A, Ali Y, **Bakhiet SM**, Mohamed NS, Ahmed ES, Fahal AH. *Eumycetoma Medical Treatment: Past, Current Practice, Latest Advances and Perspectives.* *Microbiol. Res.* 2021, 12, 899–906. <https://doi.org/10.3390/microbiolres12040066>
 12. Hassan R, Simpson H, Cano J, **Bakhiet SM**, Ganawa E, Argaw D, Newport MJ, Deribe K, Fahal AH. Modelling the spatial distribution of mycetoma in Sudan. *Trans R Soc Trop Med Hyg.* 2021 Oct 1;115(10):1144-1152.

13. Azrag RS, **Bakhiet SM**, Mhmoud NA, Almalik AM, Mohamed AH, Fahal AH. A possible role for ticks in the transmission of *Madurella mycetomatis* in a mycetoma-endemic village in Sudan. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):364-374.
14. Yosif AA, **Bakhiet SM**, Abdalla TH, Mhmoud NA, Siddig EE, Fahal AH. Invasive, aggressive mastoid bone eumycetoma: a treatment challenge. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):431-435.
15. Ganawa ETS, Bushara MA, Musa AEA, **Bakhiet SM**, Fahal AH. Mycetoma spatial geographical distribution in the Eastern Sennar locality, Sennar State, Sudan. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):375-382.
16. Mohamed ESW, **Bakhiet SM**, El Nour M, Suliman SH, El Amin HM, Fahal AH. Surgery in mycetoma-endemic villages: unique experience. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):320-323.
17. Omer RF, Ahmed ES, Ali BM, Alhaj HE, **Bakhiet SM**, Mohamed ESW, Strub-Wourgaft N, Fahal AH. The challenges of recruitment in clinical trials in developing countries: the Mycetoma Research Centre experience. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):397-405.
18. Santana A, Mhmoud NA, Siddig EE, Deligios M, Fiamma M, **Bakhiet SM**, Barac A, Paglietti B, Rubino S, Fahal AH. Metagenomics of black grains: new highlights in the understanding of eumycetoma. *Trans R Soc Trop Med Hyg.* 2021

Apr 14;115(4):307-314.

19. Zaid DM, Bakheet OE, Ahmed ES, Abdalati F, Mhmoud NA, Mohamed ESW, **Bakhiet SM**, Siddig EE, Fahal AH. Multiple extensive *Madurella mycetomatis* eumycetoma lesions: a case report and review of the literature. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):411-414.
20. Siddig EE, Nyuykonge B, Ahmed MT, Hassan R, Saad ESA, Mhmoud NA, **Bakhiet SM**, van de Sande WWJ, Fahal AH. Human actinomycetoma caused by *Actinomyces mexicanus* in Sudan: the first report. *Trans R Soc Trop Med Hyg.* 2021 Apr 14;115(4):406-410.
21. Siddig EE, Verbon A, **Bakhiet SM**, Fahal AH, van de Sande WWJ. The developed molecular biological identification tools for mycetoma causative agents: An update. *Acta Trop.* 2022 Jan; 225:106205. doi: 10.1016/j.actatropica.2021.106205. Epub 2021 Oct 21. PMID: 34687643
22. Fahal LA, Ahmed ES, **Bakhiet SM**, Siddig EE, Fahal AH. The Mycetoma Research Centre experience during the COVID-19 pandemic: obstacles and beyond. *Trans R Soc Trop Med Hyg.* 2022 Jan 19;116(1):1-3. doi: 10.1093/trstmh/trab111. PMID: 34313305
23. Fahal AH, Otieno LA, Ahmed ES, Kashif T, Khalid M, Mahmoud AH, Ododo L, Kyalo T, **Bakhiet SM**. Visual ethnographic documentation: a novel tool for mycetoma awareness and advocacy. *Trans R Soc Trop Med Hyg.* 2022 May

- 30:trac048. doi: 10.1093/trstmh/trac048. Online ahead of print. PMID: 35640654
24. Siddig EE, El Had Bakhait O, El Nour Hussein Bahar M, Siddig Ahmed E, **Bakhiet SM**, Motasim Ali M, Babekir Abdallah O, Ahmed Hassan R, Verbon A, van de Sande WWJ, Fahal AH. Ultrasound-guided fine-needle aspiration cytology significantly improved mycetoma diagnosis. *J Eur Acad Dermatol Venereol*. 2022 Jun 24. doi: 10.1111/jdv.18363. Online ahead of print. PMID: 35748131
 25. Musa EA, Abdoon IH, **Bakhiet SM**, Osman B, Abdalla SA, Fahal AH. Mycetoma management and clinical outcomes: the Mycetoma Research Center experience. *Trans R Soc Trop Med Hyg*. 2022 Jul 28:trac069. doi: 10.1093/trstmh/trac069. Online ahead of print. PMID: 35903002
 26. Watson AK, Kepplinger B, **Bakhiet SM**, Mhmoud NA, Chapman J, Allenby NE, Mickiewicz K, Goodfellow M, Fahal AH, Errington J. Systematic whole-genome sequencing reveals an unexpected diversity among actinomycetoma pathogens and provides insights into their antibacterial susceptibilities *PLoS Negl Trop Dis*. 2022 Jul 25;16(7):e0010128. doi: 10.1371/journal.pntd.0010128. Online ahead of print. PMID: 35877680
 27. Hassan R, Deribe K, Fahal AH, Newport M, **Bakhiet SM**. Clinical epidemiological characteristics of mycetoma in Eastern Sennar locality, Sennar State, Sudan. *PLoS Negl Trop Dis*. 2021 Dec 13;15(12):e0009847. doi: 10.1371/journal.pntd.0009847. eCollection 2021 Dec. PMID: 34898611

28. Nyuykonge B, Siddig EE, Konings M, **Bakhiet SM**, Verbon A, Klaassen CHW, Fahal AH, van de Sande WWJ. *Madurella mycetomatis* grains within a eumycetoma lesion are clonal. *Med Mycol.* 2022 Jul 29;60(7):myac051. doi: 10.1093/mmy/myac051. PMID: 35833294

29. Hassan R, Deribe K, Simpson H, Bremner S, Elhadi O, Alnour M, Fahal AH, Newport M, **Bakhiet SM**. Individual Risk Factors of Mycetoma Occurrence in Eastern Sennar Locality, Sennar State, Sudan: A Case-Control Study *Trop Med Infect Dis.* 2022 Aug 10;7(8):174. doi: 10.3390/tropicalmed7080174. PMID: 36006266

30. Nyuykonge B, Siddig EE, Mhmoud NA, Nyaoke BA, Zijlstra EE, Verbon A, **Bakhiet SM**, Fahal AH, van de Sande WWJ. Epidemiological cut-off values for itraconazole and ravuconazole for *Madurella mycetomatis*, the most common causative agent of mycetoma. *Mycoses.* 2022 Jul 30. doi: 10.1111/myc.13509. Online ahead of print. PMID: 36005544

31. Natalia Hounsou, Rowa Hassan, **Bakhiet SM**, Kebede Deribe, Stephen Bremner, Ahmed Hassan Fahal, Melanie J Newport. The socio-economic determinants for mycetoma occurrence at Eastern Sennar, Locality, Sennar State, Sudan. *PLoS Negl Trop Dis.*

32. Santana A, Mhmoud NA, Siddig EE, Deligios M, Fiamma M, Paglietti B, **Bakhiet SM**, Rubino S, Fahal AH. Metagenomic detection of eumycetoma causative

- agents from households of patients residing in two Sudanese endemic villages in White Nile State. PLoS Negl Trop Dis. 2022 Aug 30;16(8):e0010385. doi: 10.1371/journal.pntd.0010385. PMID: 36040926; PMCID: PMC9467367..*
33. *Hassan R, Cano J, Fronterre C, **Bakhiet SM**, Fahal A, Deribe K, Newport M. Estimating the burden of mycetoma in Sudan for the period 1991–2018 using a model-based geostatistical approach. PLoS Negl Trop Dis 2022, 16(10): e0010795. <https://doi.org/10.1371/journal.pntd.0010795>*
 34. *Litvintseva AP, Bakhiet S, Gade L, Wagner DD, Bagal UR, Batra D, Norris E, Rishishwar L, Beer KD, Siddig EE, Mhmoud NA, Chow NA, Fahal A. Genomics and metagenomics of *Madurella mycetomatis*, a causative agent of black grain mycetoma in Sudan. PLoS Negl Trop Dis. 2022 Nov 2;16(11):e0010787. doi: 10.1371/journal.pntd.0010787. PMID: 36322569; PMCID: PMC9629555.*
 35. *Hounsoume N, Hassan R, **Bakhiet SM**, Deribe K, Bremner S, Fahal AH, Newport M. Role of socioeconomic factors in developing mycetoma: Results from a household survey in Sennar State, Sudan. PLoS Negl Trop Dis 2022, 16(10): e0010817. <https://doi.org/10.1371/journal.pntd.0010817>*
 36. *Nyuykonge B, Siddig E, Mhmoud NA, **Bakhiet SM**, Zijlstra E, Verbon A, Fahal AH, van de Sande WWJ. The Wako β -D-glucan assay can be used to measure serum β -D-glucan in Sudanese patients to aid with diagnosis of *Eumycetoma* caused by *Madurella mycetomatis*. J Eur Acad Dermatol Venereol. . 2022 Oct 6. doi: 10.1111/jdv.18642. Online ahead of print*

37. Fongwen N, Asiedu KB, Bakhiet SM, Bonifaz A, Cruz I, Argaw D, Estrada-Chavez G, Fahal AH, Litvintseva A, Marks M, Salinas-Carmona MC, Sow D, van de Sande WWJ. *Diagnostics to support mycetoma management-Development of two target product profiles. Trop Med Int Health. 2022 Dec;27(12):1059-1064. doi: 10.1111/tmi.13828. Epub 2022 Nov 14. PMID: 36329624.*
38. Siddig EE, Nyuykonge B, Bakheit OEH, Hassan OB, Ahmed ES, Osman AA, **Bakhiet SM**, van de Sande WW, Fahal AH. *Staphylococcus aureus causing primary foot botryomycosis mimicking actinomycetoma: a case report from Sudan. Int J Infect Dis. 2022 Nov;124:224-226. doi: 10.1016/j.ijid.2022.10.010. Epub 2022 Oct 12. PMID: 36241164.*
39. Ahmed KO, Osman IA, Abdalnabi AM, Elkhawad A, **Bakhiet SM**, Fahal AH. *Are Pharmacists neglecting the neglected mycetoma in the most endemic area in Sudan: An Opportunity for improvement. Khartoum Med J 2022; 15(3), 2000 – 2008*
40. Fahal AH, Ahmed KO, Saeed AA, Elkhawad A, **Bakhiet SM**. *Why the mycetoma patients are still neglected. Accepted at PLOS neglected tropical disease.*
41. Eltigani HF, Elsheikh SM, Siddig E, Siddig E, Ahmed KO, **Bakhiet SM**, Fahal AH. *Mycetoma National Campaign Report. Khartoum Med J. 2022; 15(3),*
42. Elamin EM, Mukhtar MM, **Bakhiet SM**, Musa AM, El Hassan LAM, Abdullah N

- E, Kadaru AMY, El Hassan AM. Case report: An unusual case of mucosal leishmaniasis with cutaneous dissemination in Sudan and its epidemiological significance. Sudan J Dermatol. 2005; 3(2): 88-91.*
43. *Ronet C, Bakhiet SM, Pavlin C, Akira S, Launois P. S188 Leishmania major induces secretion of inflammatory cytokines and chemokines by keratinocytes via a TLR2 pathway. Int. J. Antimicrob. Agents. 2007.*
44. *Mukhtar MM, Elamin WM, Bakhiet SB, Kheir MM, Al ABi. First report on Leishmania major/HIV coinfection in a Sudanese patient. East Mediterr Health J. 2010;16(6):702-3.*
45. *Mukhtar M; Aboud Mona, Kheir M, **Bakhiet SM**, Abdullah N, Ali A, Elamin W, Elagib A. First report on Ambisome associated allergic reaction in two Sudanese Leishmaniasis patients. Am J Trop Med Hyg. 2011 Oct;85(4):644-5. doi: 10.4269/ajtmh.2011.10-0511.*
46. *Babiker A, Ravagnan S, Salviato A, Drago A, Natale A, Hassan MM, Bakhiet SM, Osman M, Capelli G, Mukhtar MM. Genetic diversity of Leishmania from Sudan and possible correlation with clinical signs: preliminary results. Giornale itlaiano Di Medicina Tropicale. 2011. 16(3-4): 68-76.*
47. *Noor AM, Elmardi KA, Abdelgader TM, Patil AP, Amine AA, Bakhiet SM, Mukhtar MM, Snow RW. Malaria Risk Mapping for Control in the Republic of Sudan. Am J Trop Med Hyg. 2012 Oct Am J Trop Med Hyg. 2012*

Dec;87(6):1012-1021. doi: 10.4269/ajtmh.2012.12-0390.

48. Yousif M, Mudawi H, Bakhiet SM, Glebe D, Kramvis A. Molecular characterization of hepatitis B virus in liver disease patients and asymptomatic carriers of the virus in Sudan. *BMC Infect Dis.* 2013; 13(1):328. DOI:10.1186/1471-2334-13-328
49. Babiker AM, Ravagnan S, Fusaro A, Hassan MM, **Bakheit SM**, Mukhtar MM, Cattoli G, Capelli G. Concomitant Infection with *Leishmania donovani* and *L. major* in Single Ulcers of Cutaneous Leishmaniasis Patients from Sudan.. *J Trop Med.* 2014; 2014:170859. doi: 10.1155/2014/170859. Epub 2014 Mar 12.
50. Al Dawi AF, Mustafa MI, Fahal AH, EL Hassan AM, Bakhiet SM, Magoub, Adil Mergani Hatim A. Mostafa, Mukhtar MM. The association of HLA-DRB1 and HLA-DQB1 alleles and the occurrence of eumycetoma in Sudanese patients. *Khartoum Med J.* 2013; 6(3): 923-929.
51. Babiker DT, **Bakhiet SM**, Mukhtar MM. (2015). *L.donovani* influenced cytokines and TLRs expression among Sudanese visceral leishmaniasis patients. *Parasite Immunol.* 2015 May 15. doi: 10.1111/pim.12202.
52. Hassan Z A, . Ishaga, Mohamed Mukhtar MM, Bakhiet SM. Molecular detection of bovine tuberculosis in El Rank area, North Upper Nile State, Sudan. *Science letter.* 2015; 3(1):23-26

53. *Mohamed OWA, **Bakhiet SM**, Gerges HKF, Kordofani AAK. Serum zinc levels in Sudanese patients with acute lymphocytic leukaemia. Int J Clin Biomed Res. 2017; 3(1): 18-20*

54. *Hamadalnil YM, **Bakheit SM**. Hepatitis B virus surface gene mutations and their clinical implications. SJMS. 2017; 12(2); 101-113.*

55. *Ali SKM, Eldaim IN, Osman SH, **Bakhiet SM**. Clinical and echocardiographic features of children with rheumatic heart disease and their serum cytokine profile. Pan Afr Med J. 2012; 13(36):36. DOI: 10.11604/pamj.2012.13.36.1487*

56. *Bedri AAAE, **Bakhiet SM**, Elkareem MOA. The Role of Interleukin-10 Promoter Polymorphism Rs1800872 (-592 C>A) In Sudanese Hepatitis B Infected Patients. European Journal of Biomedical and Pharmaceutical Sciences. 2018; 5(1): 1. 01-05*

57. *Bakhiet, SM, Ahmed. A, , Mahmood, N, Mohamed, L. Y, Siddig, E. E, Musa, A. M, Khidir, E. B, Fahal, A. H.. Metagenomic analysis of Environmental samples from Mycetoma endemic area in Sudan. Medical Mycology, Volume 56, Issue suppl_2, June 2018*

58. *Elmagzoub WA, Idris SM, Isameldin M, Arabi N, Abdo A, Ibrahim M, Khan MAA, Tanneberger F, **Bakhiet SM**, Okuni JB, Ojok L, Gameel AA, Abd El Wahed A, Bekaert M, Mukhtar ME, Amanzada A, Eltom KH, Eltayeb E. Mycobacterium*

avium subsp. paratuberculosis and microbiome profile of patients in a referral gastrointestinal diseases centre in the Sudan. PLoS One. 2022 Apr 5;17(4):e0266533.

59. *Mohamed Dafaalla M, Omer M, Abdullah E, **Bakhiet SM**, Ibrahim M. Homology-based prediction of resistance to antituberculous medications using machine learning algorithms CURRENT STATUS: POSTED SUBJECT AREAS Artificial Intelligence and Machine Learning Infectious Diseases. Research note. DOI: 10.21203/rs.2.18791/v1*
60. *Babekir Musa MB , Abdalsamad I, Mhmoud NA, Allzain H, **Bakhiet SM**. Toll Like Receptor-4 Gene Aspartate 299 Glycinepolymorphism In Sudanese Patients With Mycetoma. International Journal of Research – GRANTHAALAYAH ISSN. 2021; 9(2): 187 – 192 DOI: <https://doi.org/10.29121/granthaalayah.v9.i2.2021.3492>*

CONFERENCE PAPERS AND POSTERS:

61. *Ikram Guizani, El-Amine W, Lahmadi R, Chakroun AS, Talbi C, Bakhiet S, Cupolillo E, Mukhtar M . Simple Pcr Assays For Identification/ Differentiation of Parasites of The Leishmania Donovanii Complex . 4th World Congress on Leishmaniasis (2009).*
62. *Sahar M. Bakhiet, Elwaleed M. Elamin, Ahmed M. Elhassan and Maowia M Mukhtar. CLUSTERING OF SUDANESE LEISHMANIA ISOLATES USING RAPD .4th world congress on leishmaniasis (2009).*
63. *Elamin WM, Guerbouj S, Guizani I, Bakhiet SM, El-Hassan SM, El_Hassan AM,*

- Musa AM, Kheir MM and Mukhtar MM. Leishmania archibaldi is the major cause of leishmaniasis in Sudan. Oral presentation and abstract. Conference on endemic and infectious diseases in Sudan, Ministry of Science and Technology, National Centre for Research, Tropical Medicine Research Institute, Institute of Endemic Diseases, WHO/TDR and Federal Ministry of Health, Sudan. Sharja Hall 5-8 May 2003.*
64. *Maowia M. Mukhtar, Dina T. Eltayeb, Sahar M. Bakhiet, El Waleed M. Elamin. The cytokine profiles of Sudanese patients with different clinical forms of leishmaniasis. 5th World Leish May 2013. Brazil*
65. *Enaam Hussein, Ahmed Mohamed EL Hassan, Sahar Mubarak Bakhiet. Epstein - Barr virus Expression in Hodgkin's Lymphoma in Sudan. 23rd Congress of the European Hematology Association to be held in Stockholm, Sweden, 2018*
66. **Bakhiet SM.** *The Mycetoma Research Gaps Seminar (2017): Diagnostic Gaps in Mycetoma*
67. *Najwa A Mhmoud, Sarah Abdalla Ahmed, Lim W4. Sahar Mubarak Bakhiet, Ahmed Fahal, Wendy W. J. van de Sande. Collariella causiiformis , a novel agent of human eumycetoma with yellow grains, 6th international conference of Mycetoma*
68. *Brüggemann R, Nyaoke B, Saad ES, **Bakhiet SM**, Fahal AH. A randomized, double-blind phase II proof-of-concept superiority trial of fosravuconazole 200 mg or 300 mg weekly dose versus itraconazole 400 mg daily, all three arms in combination with surgery, in patients with eumycetoma in Sudan—pharmacokinetic results. ISHAM 2022, DOI: 10.1093/mmy/myac072.S4.5b*
69. *Siddig SS, Nyaoke B, Saad ES, **Bakhiet SM**, Fahal AH. P445 Clinical evaluation*

of the performance of the most commonly used eumycetoma diagnostic tests using sequencing of the internally transcribed spacer region as the golden standard. ISHAM 2022, DOI: 10.1093/mmy/myac072.P445

CHAPTER & BOOKS:

- WHO Technical report series (975). Research priorities for Chagas Disease, Human African Trypanosomiasis and leishmaniasis. 2315828
- Target Product Profile for a rapid test for diagnosis of Mycetoma at the primary health-care level. WHO | Neglected Tropical Diseases. 2022.

Other ESTABLISHMENTS

- Molecular biology unit at the Mycetoma research Centre laboratory
- Immunology unit at the Mycetoma research centre laboratory
- Quality control unit - the Mycetoma research centre
- Contributed to Elhassan clinical trial centre for NTD
- Wad Onsa Mycetoma Centre laboratory for diagnosis /Sennar state