Sudan University of Science and Technology College of Postgraduate Studies

Molecular Epidemiology and Drug Resistance among Malaria Parasite Isolates From Sennar Area – Central Sudan

المسح الوبائي الجزيئي والمقاومة للعقاقير عند عزلات طفيل الملاريا بمنطقة سنار - وسط السودان

A thesis submitted for fulfillments of the requirements of the degree of doctor of philosophy in Parasitology

By: Ali Elamin Nasir Hamad

(MS.c in Clinical Microbiology - Sudan University of Science and Technology)

Supervisor: Dr. Ibrahim M. Elhassen

Associated Professor, Institute of Endemic Diseases, Faculty of Medicine, University of Khartoum

Co-Supervisor: Dr. Humodi A. Saeed

College of Medical Laboratory Sciences, Sudan University of Sciences & Technology.

January 2010