

## Historical Perspectives

### Book Review

Mohammed Hamad Satti, His Life and Work

By Professor Ahmad Al Safi

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### Launching the book

An evening to commemorate the achievements of Dr. Mohamed Hamad Satti (1913-2005) by launching the book was held at the Diplomatic Club in Khartoum on the 16th of April 2011 at 8-10 p.m. The event was organized by the Sudan Medical Heritage Foundation, Sudan National Academy of Sciences, and the Satti family (Photo 1). The group that prepared for this event was made from Prof. Ahmed Mohammed ElHassan; a professor of pathology and an international figure in his field, Prof. Suad Sulaiman; a known research leader in the field of medical zoology, Prof. Ahmad Al Safi; the writer of the current book and Dr. Nureldin Satti; a diplomat who ended his career with the Government of Sudan as the Sudanese Ambassador in France and spent 10 years with the United Nations in different

missions.

The event was chaired by Prof. Ahmed Mohammed Elhassan, Prof. Ahmad Al Safi, Prof. Suad Mohammed Sulaiman, and Dr. Abdelmoneim Satti, a university professor of chemistry who spent 9 years with the Association of African Universities (AAU) in Ghana.

The speakers that evening were Prof. Ahmed Mohamed Elhassan, colleagues, students and friends of Dr. Satti and family; Prof. ElSheikh Mahgoub Gaafar, Prof. Saida Al Safi, Prof. Abdelhamid Ibrahim, Dr. Mamoon Mohamed Hussain, Dr. Mohamed Mandour, Dr. Nahid Mohamed Elhassan, and several others.

Neighbours and friends of the Satti family were able to shed a lot of light on Dr. Satti's character and the way of life he lead in general.

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## Preface

This book was No. 4 in a project entitled “Sudan Health Trilogy,” launched Dr Ahmad Al Safi. The Trilogy includes “A Biographical Dictionary of Health Care Professionals in Sudan”, “Pioneers of Sudanese Medicine Series” and a “Biography of Biomedical Literature in Sudan”.

At the end of the preface, the author clarified that the present volume profiles the life and work of Dr. Mohamed Hamad Satti, the pathologist, epidemiologist, teacher and researcher. “Among these pioneers Dr. Satti has been exemplary. He did his job as expected in terms of quality, and he won the admiration and respect of his peers, colleagues and associates.”

## Introduction

In this part of the book, Dr. Ahmad Al Safi wrote about Sudan’s people health and systems over the last three centuries. Relevant data was gathered from the accounts of the travelers, explorers, historians and missionaries who visited the country, and from the writings of the medical officers who worked in the country early in the 19th Century.

The author concluded that relying on those sources the health of the Sudanese was good, but not the health conditions. However, this country was swept by several epidemics, which were generally imported from neighboring countries and connected with famine and drought.

The epidemics included meningitis, cholera, yellow fever, typhus and those from endemic diseases such as malaria, leishmaniasis, onchocerciasis, schistosomiasis, guinea worm infections, venereal disease, leprosy and childhood diseases.

Earlier to the 19th century, famine and poverty were quite common. The health scene was influenced by supernatural beliefs and traditional healers. In 1821, through the Turkish Egyptian rule, Mamlouk doctors and later European doctors, some element of Western Medicine were brought into the country.

In the beginning of the 20th century, medical services were provided by Egyptian and Syrian doctors. There were only seven British doctors and two nurses in Khartoum Hospital at the outbreak of World War One. This was the scene, when Dr. Satti was born and the state of affairs when he started medicine and research.

## Early years and education

Dr. Satti was born in Shendi and attended Elementary and Intermediate schools in Atbara. In 1927, he joined the Old Gordon Memorial College (the only secondary school then). He graduated from Kitchener School of Medicine (KSM) in 1935 with Diploma of Kitchener School of Medicine (DKSM). KSM was equivalent to distinguished schools of medicine in its time, in the world as documented by the author.

Dr. Satti died of natural causes on Tuesday, 15 March 2005, and was buried in Faroug Cemetery.

## Career

“After graduation, Dr. Satti joined Sudan Medical Services and worked in areas endemic to Leishmaniasis for 10 years (1936-1946).

He joined Stack Medical Research Laboratories (SMRL) during the years 1946-1968. During that period, he had postgraduate medical studies in the United Kingdom for 2 years starting 1952.

(Photos 2-4). In 1956, he was appointed as Medical Zoologist, where he started with a study on an outbreak in Kala-azar in Southern Fung.

In 1959, he acquired a degree of Master of Public Health (MPH) from John Hopkins School of Hygiene and Public Health in Baltimore, USA.

In 1962 and up to 1980, he was elected member of the WHO Advisory Panel of parasitic diseases. In 1963-1968, he was the Director of SMRL. He succeeded prof. Mansour Ali Haseeb who was appointed the first Sudanese Dean for the Faculty of Medicine.

On retirement in 1969, Dr. Satti was appointed as advisor for medical research. He had two assignments from WHO: as consultant epidemiologist and public health advisor for Lake Nasser Development Centre, Aswan, UAR (Egypt), 1970 and in the people's Democratic Republic of Yemen, South Yemen, 1972. Excellent and highly informative reports came out of those two assignments.

Throughout his career, Dr. Satti occupied several posts in Sudanese Ministry of Health and filled different specialties during his active service. He was the bacteriologist, medical zoologist, forensic medicine specialist, epidemiologist, pathologist and researcher.

## Character

“Dr. Satti had been an unassuming man. He was firm in his purpose, humbly believing in himself, uninterested in social success or financial reward and did not have a private clinic throughout his working life”.

## International presence

Dr. Satti attended and presented many papers to international conferences such as the first Italian Conference of Tropical Medicine in East Africa

in Asmara, 1952. He attended the 6th, 7th, 8th, 9th, 10th and 12th International Congress of Tropical Medicine and Malaria (1958 to 1986). He also attended the WHO Onchocerciasis Expert Committee as Vice Chairperson, 1986.

## Teaching

Dr Satti taught pathology, microbiology and forensic medicine from 1946-1948 in KSM. He was the only teacher and examiner in forensic medicine in the Faculty of Medicine, University of Khartoum from 1963 to 1969, as part-time teacher.

## Initiatives

Dr. Satti, through several achievements, laid down the infrastructure for laboratory services and medical research in Sudan. He either proposed or established the following: the foundation of the National Health Laboratories, the Cancer Institute for Tropical Diseases Research, the Medical Research Council, the National Council for Research, and School of Tropical Medicine. He initiated new specialties of medical entomology, malacology, medical zoology and vertebrate ecology, by sending postgraduates to specialize in these fields.

## Major research

“In collaboration with Prof. Robert Kirk, Prof. Haseeb, Prof. Morgan, Dr. Lewis, Dr. Osman M Abd Al Nour, and Dr. Horgan with assistance of several coworker, Dr. Satti carried out extensive field and laboratory studies on leishmaniasis, yellow fever, weal syndrome, kakoom paralysis, trichomonadae, bancroftian filariasis, cutaneous larva migrans, onchocerciasis, malaria, infective hepatitis, waterborne disease, cholera, typhoid fever, cerebrospinal meningitis, arboviruses,

smallpox, and presbycusis (a progressive bilateral symmetrical age-related sensorineural hearing loss), and how it affects the Mabaan tribes living in the southern and western part of the southern Fung district”

## Field expeditions

The fields of research Dr. Satti chose were far from the glamorous and lucrative clinical medicine. “Dr. Satti was interested in research related to epidemiology, medical zoology, malacology, and in the areas of disease vectors, hosts and reservoir.” He established that *Phlebotomus papatasi* is responsible for leishmaniasis and *P. orientalis* is responsible for Kala-azar and that sodium stibogluconate injection is the drug of choice. “He investigated the epidemiology, causative agents, vectors, diagnosis and treatment of these killer diseases. He left behind a legacy of scientific excellence including more than 60 published papers and solicited reports”.

“Dr. Satti surveyed eastern and southern Sudan studying Leishmaniasis, Bahr Elghazal region for onchocerciasis and testing suramin sodium (Antrypol), Nuer tribe for encephalomyelitis called “Weal Syndrome”. He identified Kakoom paralysis, cutaneous larva migrans in Kordofan, jaundice in Gadaref and typhoid fever in Western Sudan. He investigated presbycusis in the Mabans tribe, the environmental effects of Aswan High Dam on Waditralfa, yellow fever in the Nuba Mountains and Kurmuk. He lead a team investigating the adverse effects of the consumption of high nitrates well water in two villages in Northern Kordofan, and filariasis in Darfur in Geneina. He supervised building a field laboratory in Leishmania endemic area of the Blue Nile in Sennar, and studied health aspects of Rahad Irrigation Project and ongoing research on schistosomiasis in Gezira”.

“He was probably the only scientist who could have been solicited to write an authoritative review article, and indeed he did, on practically any major tropical disease”.

## Recognition

Many awards and prizes were given to Dr. Satti for profound work. Elhassan and Zijlistra dedicated their monument supplement of the Transactions of the Royal Society of Tropical Medicine and Hygiene ‘Leishmaniasis in Sudan’ to Dr. Mohamed Hamad Satti and to the memory of Prof. Robert Kirk and Dr. DJ Lewis, who pioneered leishmaniasis research in Sudan.

## Family

Vital to Dr. Satti’s success was the support he received from his wife and children. Every one of them was a successful professional in this or that field of life (Photo 5).

I should add here that vital to Dr. Satti’s success was the support and the high quality upbringing he received from his mother. When he got the chance for higher education, he already had the right morals and attitudes for success. Above all, it was Allah’s will and support.

## Acknowledgements and comments

At the end of this review, I would like on myself and on behalf of Satti’s family to thank Prof. Ahmad Al Safi for this nicely and thoroughly researched work. I extend my thanks to Prof. Mustafa Abdalla M Salih because it was his suggestion to write this review for the Sudanese Journal of Paediatrics.

## Photos:



Photo 1: Launching activity at the Diplomatic Club in Khartoum (dated 16.4.2011).

Chair persons and part of the audience. Left to right: Prof. Suad Sullaiman, Prof. Ahmad Al Safi, Prof. Ahmed Mohammed Elhassan, and Dr. Abdelmoneim Satti.



Figure 1 :In London

Photo 2 (Book Figure 1): Dr. Satti in the centre. Mr Ahmed Osman (one of the pioneer Sudanese radiographers) to the left of Dr. Satti. (Period approximately between 1952 and 1954).



Photo 3 (Book Figure 2): This photo was probably taken in London between 1952 and 1954.



Photo 4 (Book Figure 5): Dr. Satti is the first to the right of the 3rd row. (Period between 1952 and 1954)



Photo 5 (Book Figure 6): The child in the photo is the great grand-child; Ahmad, the son of Dr. Abdelaziz Abdelmoneim Sulaiman. His mother, Dr. Sulaf Ibrahim AbdelAziz, is the grand-daughter of Dr. Satti. Her mother is Awatif Satti. The photo was taken about 1994 to 1995.

## Biographer's Profile

**Prof. Ahmad Al Safi**  
(Ahmadalsafi@gmail.com)

Ahmad Al Safi holds a bachelor of Medicine & Surgery of the Faculty of Medicine, University of Khartoum (MBBS, 1971), a Diploma of Anaesthetics, Fellowship of the Royal College of Surgeons of England (FFARCS, 1977) and Fellowship of the Royal College of Anaesthetists of England (FRCA, 1992). He had orthodox training in traditional Chinese medicine and acupuncture as applied to anaesthesia, analgesia and therapy in Nanjing, China (1982). He is a currently Professor of Anaesthesiology, Khartoum College of Medical Sciences and Head Department of Anaesthesia, Bashayer Teaching Hospital, Khartoum.

Prof. Al Safi founded several new governmental and non governmental organizations. Those include Traditional Medicine Research Institute in the National Council for Research (1981) which he designated a WHO collaborating centre (1984). He founded the Sudan Medical Heritage Foundation in 2005. He also established Maharat as a nongovernmental, continuing medical education training and consultation centre. He carried out studies that became the preamble for the teaching hospitals. Another study became the preamble for the Specialist Register Ordinance (1985).

Prof. Al Safi was a member of the WHO/EMRO Expert Advisory Panel for Traditional Medicine for over 10 years. He was Editor in Chief or member of editorial boards of several journals. He wrote and edited several books in systems related subjects, and a Manual on Rules and Procedures of Deliberative Assemblies (1999, 2006).