بسم الله الرحمن الرحيم

Sudan University of Science and Technology-College of Graduate Studies

Evaluation of Efficacy of Albendazole 2.5% Drench Formulation and Possible Multi-drug Resistance for Treatment of Gastrointestinal Nematodes in Naturally Infected Sheep

تقويم الفعالية العلاجية لعقار البندازول 2.5% المعد للتجريع و احتمال وجود مقاومة متعددة لعلاج الديدان المعوية في الضأن المصاب طبيعيا

A thesis submitted in fulfillment of the requirement of the Graduate College for M.V.M. degree in (Pharmacology)

By

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قال تعالى:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (2) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (3) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (3) الْرَبِّكَ اللَّامِ (4) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ (5)

صدق الله العظيم

(سورة العلق الآيات من 1 الى 5)

DEDICATION

To my guardian angels, first teachers, who taught me

To trust Allah when I was falling down, and

To believe in myself

Mam and Dad

Your day and night Prayers allow me accomplishing this work

Many thanks

To my grandfathers and grandmothers under the ground ask Allah blessing you,

to my sisters and brothers who keep encouraging and enlightening my way

DECLARATION

Here it is to declare that this research work entitled: "Evaluation of Efficacy of Albendazole 2.5% Drench Formulation and Possible multi-drug resistance for treatment of Gastrointestinal Nematodes in Naturally Infected Sheep" was carried out in the department of Veterinary Medicine and Surgery, College of Veterinary Medicine, Sudan University of Science and Technology under the supervision of Prof. Hisham Ismail Seri Farah and was not presented for a degree in any other university.

Nuha Abu Elabbas Dia Alnaeim Mohammed Elsaeed

Published work

Part of this work has been accepted for publication as paper entitled:

1. Nuha Abu Elabbas Dia Alnaeim, Hisham Ismail Seri, Siham Elias Suliman, Omar Ibrahim Omar Ali (2019). Evaluation of Efficacy of four anthelmintics and possible multiple-Drug Resistance in Sheep in Sudan. *SUST Journal of Agricultural and Veterinary Sciences, 20(1):* (Accepted)