

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

وَفِي الْأَرْضِ آيَاتٌ لِلْمُوقِنِينَ (20) وَفِي  
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# **Dedication**

This work is dedicated to my Mother, father, brothers and sisters, without whom I would not have had the strength and support necessary to succeed throughout my graduate work. I also dedicate this work to my friends and colleagues whose friendship through laughter and tears helped me thrive.

# **Acknowledgement**

With a great deal of respect I want to thank my supervisor Dr. Humodi Ahmed Saeed, who spared neither time nor effort in enlightening and helping me. I also thank everybody in the research Lab. for their scientific discussion that has contributed to this project. I especially thank Dr. Mogahid, Ustaz. Mansoor, Dr. Misk Alyaman, Mr. Modather and Mr. Muntaser for their help and support.

## **Abstract**

This study was carried out in the period from May 2007- March 2008 to evaluate the real-time PCR technique for direct detection of *Shigella flexneri* in stools. Forty-six stool specimens were collected from patients attended to Khartoum state Hospitals. Bacterial DNA was extracted directly from each stool specimen using phenol chloroform technique. The DNA amplified by real-time PCR using specific *Shigella flexneri* primers. *Shigella flexneri* DNA detected in 12 (26.1%) of the extract. The study concluded that the real-time PCR technique facilitates rapid direct detection of *Shigella flexneri* in stool without any culture.

## الخلاصة

اجريت هذه الدراسة في الفترة ما بين مايو 2007م إلى مارس 2008م لتقييم تقنية المسبار الجيني في الكشف المباشر عن الش قىلا الفلكسينيرية فى عينات البراز. تم تجميع ست و اربعين عينة براز من مرضى مستشفيات ولاية الخرطوم، ثم تم استخلاص الحمض النووى ( الدنا) البكتيرى مباشرة من هذه العينات بواسطة تقنية الفيزول كلورفورم. تم الكشف عن الش قىلا الفلكسينيرية فى العينات المستخلصة باستخدام تقنية تفاعل البلمرة المتسلسل الزمني وأظهرت النتائج الكشف عن وجود 12 عينة ايجابية (26.1%). خلصت الدراسة الى ان تقنية البلمرة المتسلسل الزمني يساعد على الكشف المباشر و السريع لجراثيم الش قىلا فى عينات البراز

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