

بسم الله الرحمن الرحيم

Sudan University of Science and Technology

College of Graduate Studies

**Detection of *Salmonella typhimurium* in Stool Specimens by Real time  
Polymerase Chain Reaction**

الكشف عن السالمونيلا التيفية الفأرية في عينات البراز بتقنية تفاعل البلمرة المتسلسل الزمنى

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By

LEMIA MOHAMED ALHASSAN ALTYEB

Supervisor

Dr. Humodi Ahmed Saeed

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الرَّحْمَنِ \* عَلَّمَ الْقُرْآنَ \*  
خَلَقَ الْإِنْسَانَ \* عَلَّمَهُ الْبَيَانَ \*

صدق الله العظيم

سورة الرَّحْمَنِ

# *Dedication*

*My great love, regards and every things to:*

*My country*

*Family*

*Teachers*

*Friends*

*Who taught me how to be optimistic and lead me in the road of success, to whom I will always be in dept.*

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## **Abstract**

This study was carried out in the period from May 2007- March 2008 to detect the presence of *Salmonella typhimurium* in stool of patients who were suffering from acute gastrointestinal tract infection. Forty seven stool specimens were collected from patients who were attended to Bashair Hospital, Omdrman Teaching Hospital and Haj Alsafi Hospital during the study period.

Bacterial DNA was extracted from each stool specimen. The DNA was runned using real time PCR technique to detect *S .typhimurium*

The result revealed that only two specimens were positive.

The study concluded that the real time PCR technique facilitates detection of *S .typhimurium* without bacteriological culture.

## الخلاصة

أجريت هذه الدراسة في الفترة بين مايو ٢٠٠٧ إلى مارس ٢٠٠٨ للكشف عن وجود بكتيريا السلمونيلة التيفية الفأرية في براز مرضى التهابات المعوية الحادة. تم تجميع سبعة و أربعون عينة من مرضي ترددوا على مستشفى بشايرومستشفى امدرمان التعليمي ومستشفى حاج الصافي خلال فترة المستشفى. تم استخلاص الحمض النووي الريبي منقوص الأكسجين من كل عينة من عينات البراز استخدمت تقنية متسلسل البلمرة الزمني للكشف علي السالمونيلة التيفية الفأرية. أظهرت النتائج وجود عينتين موجبتين في مرضي التهابات المعوية الحادة. كما خلصت الدراسة إلى أن تقنية متسلسل البلمرة الزمني تسهل الكشف عن بكتيريا السالمونيلة التيفية الفأرية.

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