

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

فَأَمَّا الزَّبَدُ فَيَذْهَبُ جُفَاءً وَأَمَّا مَا يَنْفَعُ النَّاسَ  
فَيَمْكُتُ فِي الْأَرْضِ كَذَلِكَ يَضْرِبُ اللَّهُ الْأَمْثَالَ

صدق الله العظيم

سورة الرعد الآية 17

# Dedication

**...To the soul of my father  
Who work ed hardly for us  
To my dear mother  
To my brothers & my sisters  
To whom I love**

## Acknowledgment

First of all I would like to thank Allah almighty in his Holiness and Gracefulness for giving me the opportunity to further carry my studies and thus my career.

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## Abstract

This study was carried out during the period from May 2007- March 2008 to detect the presence of *Citrobacter diversus* in patients suffering from urinary tract infection. Forty six samples were collected from patients attended Khartoum Teaching Hospital Bhri Teaching Hospital and National Health Laboratory.

Bacterial DNA was extracted from each urine specimen using phenol chloroform technique.

Real-time PCR technique was adopted to detect presence of *C.diversus*

The result revealed that only three (6.5%) specimens were positive for *C.diversus* and 43 (93.5%) were Negative.

The study concluded that the Real-time Polymerase chain reaction technique facilitates detection of bacterial pathogens without bacteriological culture.

## النتائج

تم تنفيذ هذه دراسة في ولاية الخرطوم في الفترة بين مايو 2007م إلى مارس 2008م لتحديد وجود بكتيريا (الليمونية المتباينة) في عينات بول مرضى التهاب المجارى البولية.

تم تجميع ست وأربعون عينة من هؤلاء المرضى من مستشفى الخرطوم التعليمي، مستشفى بحري التعليمي والمعمل القومي للبحوث (استاك).

تم استخلاص الحمض النووي للبكتيريا من عينات البول باستخدام تقنية الفينول كلوروفورم

وقد استخدم تقنية تفاعل البلمرة المتسلسل الزمني للكشف عن بكتيريا (الليمونية المتباينة) وأظهرت النتائج وجود ثلاثة عينات ايجابية (6.5%) و 43 (93.5%) عينة سلبية.

خلصت الدراسة إلى أن تقنية تفاعل البلمرة المتسلسل الزمني تسهل الكشف عن البكتيريا الممرضة بدون اللجوء لتقنيات الاستزراع المخبري.

## Table of Contents

المقدمة .....	I
<b>Dedication.....</b>	<b>II</b>
<b>Acknowledgment.....</b>	<b>III</b>
<b>Abstract (English).....</b>	<b>IV</b>
<b>Abstract(Arabic).....</b>	<b>V</b>
<b>Table of contents.....</b>	<b>VI</b>
<b>List of Tables.....</b>	<b>VIII</b>
<b>List of Figures.....</b>	<b>IX</b>
<b>Chapter One: Introduction and Literature Review</b>	
<b>1.1 Introduction.....</b>	<b>1</b>
<b>1.1.1 Entrance.....</b>	<b>1</b>
<b>1.1.2 <i>Citrobacter diversus</i> (C. diversus).....</b>	<b>2</b>
<b>1.1.2.1 Historical background.....</b>	<b>2</b>
<b>1.1.2.2 General concepts.....</b>	<b>3</b>
<b>1.1.2.3 Classification.....</b>	<b>3</b>
<b>1.1.2.4 Definition.....</b>	<b>3</b>
<b>1.1.2.5 Normal habitat.....</b>	<b>3</b>
<b>1.1.2.6 Antigenic Structures.....</b>	<b>3</b>
<b>1.1.2.7 Mode of transmission.....</b>	<b>4</b>
<b>1.1.2.8 Virulence factors.....</b>	<b>4</b>
<b>1.1.2.9 Pathogenesis.....</b>	<b>4</b>
<b>1.1.2.9.1 Neonatal meningitis.....</b>	<b>4</b>
<b>1.1.2.9.2 Urinary tract infection.....</b>	<b>4</b>
<b>1.1.2.9.3 Others nosocomial diseases.....</b>	<b>6</b>
<b>1.1.2.10 Laboratory diagnosis.....</b>	<b>6</b>
<b>1.1.2.10.1 Collection and transport of specimens.....</b>	<b>6</b>
<b>1.1.2.10.2 Isolation, Interpretation &amp; Identification.....</b>	<b>7</b>

1.1.2.10.3	Serological testing.....	7
1.1.2.10.4	Molecular diagnostic techniques.....	8
1.1.2.10.5	Real-time PCR.....	8
1.2	Literature review.....	10
1.3	Objectives.....	12
1.3.1	General Objectives.....	12
1.3.2	Specific Objectives.....	12

## **Chapter Two: Materials and Methods**

2	. Materials and Methods.....	13
2.1	Study area.....	13
2.2	Subjects.....	13
2.3	Age group.....	13
2.4	Sample size.....	13
2.5	Site of collection.....	13
2.6	DNA extraction.....	13
2.6.1	Phenol-choloroform-Isoamylacohol ( PCI ) Methods.....	13
2.7	Real time PCR protocol.....	14
2.7.1	Preparation of real time PCR mixture.....	14
2.7.2	Preparation of Working primer.....	15
2.7.3	Preparation of plate for real time PCR.....	15
2.7.4	PCR condition.....	15
1.7.5	PCR product analysis.....	16

## **Chapter three: Results**

3	Results	
3.1	Clinical specimens.....	17
3.2	DNA extraction.....	17
3.3	Detection of <i>C.diversus</i> .....	17

## **Chapter Four : Discussion**

4	Discussion.....	27
	References.....	29
	Appendices.....	33

## **List of Tables**

<b>Table (1): Distribution of specimens according to hospitals.....</b>	<b>17</b>
<b>Table (2): Distribution of specimens according to gender.....</b>	<b>18</b>
<b>Table (3): Distribution of specimens according to age.....</b>	<b>18</b>



## List of Figures

- Figure (1): shows Plate No 1 typical amplification of real time PCR.....  
19
- Figure (2): shows Plate No 2 typical amplification of real time PCR.....  
20
- Figure (3): shows a real sigmoid curve for the all specimens.....  
21
- Figure (4): shows the reading of non template control (NTC).....  
22
- Figure (5): shows positive result with sigmoid curve.....  
23
- Figure (6): Plus/Minus scoring analysis showing Two positive samples (blue color)  
above base line (threshold) 24
- Figure (7): shows Real-time PCR results for *C.diversus*.....  
25

Figure (8): Shows percentage of C.diversus among female and male .....26

Figure (9): Show preparation Of real-time PCR mixture at safety cabinet

35

Figure (10) Shows plate was sealed by heat sealer

36

Figure (11) shows Real-time PCR plate ready for run in Quantica thermalcycler

37