hossam maghraby

شبكة المعلومات الجامعية

بسم اللّه الرحمن الرحيم

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التوثيق الالكتروني والميكروفيلم

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التوثيق الإلكتروني والميكروفيلم

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بالرسالة صفحات
لم ترد بالأصل

بسم الله الرحمن الرحيم

Detection of *gyrA* gene mutations in quinolone – resistant clinical isolates of *Pseudomonas aeruginosa*.

Thesis

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BY

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Dedicated to

My dear mother, my great father and my helpful husband for their love and support.
I am grateful to all of them.
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Contents

List of abbreviations

ADP	Adenosine diphosphate
API	Apparatus Procedure Identification
AS- PCR	Allele – specific PCR
ATP	Adenosine triphosphate
Blast	Basic local alignment search tool
bp	Base pair
C. coli	*Campylobacter coli*
cfu	Colony forming units
C. jejuni	*Campylobacter jejuni*
CSOM	Chronic suppurative otitis media
E-coli	*Escherichia coli*
EF-2	Elongation factor 2
ETA	Exotoxin A
G+C	Guanosine + cytosine
G segment	Gate segment
IFN	Interferon
IgA	Immunoglobulin A
IgG	Immunoglobulin G
Ile	Isoleucine
kDa	KiloDalton

LPS	Lipopolysaccharide
MAMA	Mismatch amplification mutation assay
MDR	Multi-drug resistant
MIC	Minimum inhibitory concentration
MIC_{90}	MICs at which 90% of the strains are inhibited
MIC_{50}	MICs at which 50 % of the strains are inhibited
MOMP	Major outer membrane protein
MW	Molecular weight
NAD	Nicotinamide adenine dinucleotide
NCCLS	National Committee for Clinical Laboratory Standards
nRI	Non radioisotopic
N-terminal	Amino- terminal
P.aeruginosa	*Pseudomonas aeruginosa*
PCR	Polymerase chain reaction
PLC	Phospholipase C
QRDR	Quinolone -resistance -determining region
RFLP	Restriction fragment length polymorphism
rpm	Revolutions per minute
S.aureus	*Staphylococcus aureus*
Spp.	Species
SSCP	Single -strand conformational polymorphism

INTRODUCTION

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PSEUDOMONADS

Pseudomonads are gram –negative straight or slightly curved rods. They are motile by means of one or more polar flagella, though some strains also have lateral flagella of different wavelengths. They are non-sporing and not-acid fast, strict aerobes, but some grow anaerobically in the presence of nitrate. They are catalase – positive, and attack sugars oxidatively; none is fermentative or photosynthetic. They are nutritionally unexacting, nearly all grow with ammonium salts and a single carbon source [1].

Some strains are pathogenic for humans and animals. The G + C content of their DNA is 57-70 mol % and the type species is *Pseudomonas aeruginosa* [1].

Of the pseudomonads most familiar to medical microbiologists, only the fluorescent group (*Pseudomonas aeruginosa, Pseudomonas putida* and *Pseudomonas fluorescens*) remain within the genus *Pseudomonas,* as does the non-fluorescent *Pseudomonas stutzeri* . The other clinically significant species in human medicine have been allocated to different genera [1].

The classification of pseudomonads is based on rRNA / DNA homology and common culture characteristics . The medically important pseudomonads are listed in table 1 [2].