Phenotypic and Genotypic Detection of Oxacillinases in Carbapenem-Resistant Acinetobacter Species

Thesis

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Iman Mohammed

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List of Abbreviations

Abb.	Full term

A. baumannii.....*Acinetobacter baumannii*
AFLP.....*Amplified fragment length polymorphism*
AIs .....*Auto inducers*
AMEs .....*Aminoglycoside-modifying enzymes*
AMS.....*Antimicrobial stewardship.*
APBA .....*Aminophenyl boronic acid.*
APIC .....*Association for professionals in infection control*
ARDRA .....*Amplified rRNA gene restriction analysis*
ASC .....*Active screening culture*
AST.....*Antimicrobial susceptibility testing*
ATCC.....*American type culture collection*
ATP .....*Adenosine triphosphate*
BA.....*Boronic Acid*
CA .....*Clavulanic Acid*
CDC .....*Centre for disease prevention and control*
CDT.....*Combination disc test*
CFU ..... *Colony forming unit*
CHDLs ..... *Carbapenem-hydrolyzing class D* β*-lactamases.*
CHG .....*Chlorhexidine gluconate*
CHLOs .....*Carbapenem hydrolyzing oxacillinases.*
Ci PA .....*Complement inhibitory protein A*
CLSI ..... *Clinical and laboratory standards institute*
CMS..... *Colistimethate sodium*
CP .....*Contact precautions*
CPE .....*Carbapenemase-producing Enterobacteriaceae*
CPGNB .....*Carbapenemase-producing Gram-negative bacilli.*
CRA .....*Carbapenem resistant Acinetobacter*

List of Abbreviations (Cont...)

Abb.	Full term
CRAB	*Carbapenem resistant Acinetobacter baumannii*
CRE	*Carbapenem resistant Enterobacteriaceae*
CRGNB	*Carbapenem resistant gram negative bacteria.*
CSMS	*Chaperon secretion membrane systems*
CST	*Colistin*
Ct	*Cycle threshold*
DD	*Disc diffusion*
DDST	*Double disc synergy test*
DNA	*Deoxyribonucleic Acids.*
DPA	*Dipicolinic acid*
ECDC	*European Centre for Disease Prevention and Control*
EDTA	*Ethylene diamine tetra-acetic acid*
ESBL	*Extended spectrum beta lactamase*
E-test	*Epsilometer test*
EUCAST	*European committee of antimicrobial susceptibility testing*
FDA	*Food and Drug Administration*
GES	*Guiana extended spectrum*
GNB	*Gram negative bacilli*
HA	*Herellea agar*
HCWs	*Health care workers.*
HH	*Hand hygiene*
HICPAC	*Healthcare infection control practice advising committee.*
HMM	*High Molecular Mass*
HMP	*Heat-modifiable protein*
ICU	*Intensive care unit*
IL	*Interleukin*

List of Abbreviations (Cont...)

Abb.	Full term
IMI	*Imipenem-hydrolyzing □-lactamases*
IPC	*Infection prevention and control*
IPM	*Imipenem*
IRAB	*Imipenem resistant Acinetobacter baumanii*
KC	*Chemokines*
KPC	*Klebsiella pneumoniae carbapenemase*
LAMP	*Loop-mediated isothermal amplification.*
LC	*Liquid chromatography*
LMM	*Low Molecular Mass*
LPS	*Lipopolysaccharides*
MALDI-TOF	*Matrix-assisted laser desorption ionization time of flight*
MAPK	*Mitogen activated protein kinase*
MBL	*Metallo-β-lactamase*
mCIM	*Modified carbapenem inactivation method*
MDR	*Multidrug resistant*
MDRAB	*Multidrug resistant Acinetobacter baumannii*
MDRGNB	*Multidrug resistant gram negative bacteria.*
MHT	*Modified Hodge Test*
MIC	*Minimal inhibitory concentration*
MIP	*Macrophage inflammatory protein*
MRSA	*Methicillin Resistant Staphylococcus Aureus*
MS	*Mass Spectrophotometry*
NCCLS	*National committee for clinical laboratory standards*
NDM	*New Delhi metallo-β lactamase*
NF-KB	*Nuclear factor kappa B*
NGS	*Next generation sequencing*
NMC	*Non metalloenzyme carbapenemase*

List of Abbreviations (Cont...)

Abb.	Full term
OF	*Oxidation-fermentation*
OMP	*Outer membrane protein*
Opr	*Outer membrane porin*
OXA	*Oxacillinases enzymes*
PAE-MHT	*Pseudomonas aeroginusa modified Hodge test*
PBPs	*Penicillin binding proteins*
PCR	*Polymerase chain reaction*
PHAC	*Public health agency of Canada*
PPE	*Personal protective equipment.*
QS	*Quorum sensing*
RCS	*Rapid CARB screen.*
RFLP	*Restriction fragment length polymorphisms*
RND	*Resistance nodulation division*
RNS	*Reactive nitrogen species*
ROS	*Reactive oxygen species*
r-RNA	*Ribosomal RNA*
RT-PCR	*Real Time- Polymerase chain reaction*
SaPr	*Surface adherence protein regions*
SIM	*Seoul imipenemase*
SME	*Serratia marcescens enzyme*
TGC/TIG	*Tigecycline*
TLR	*Toll like receptor*
Tm	*melting temperature*
TNF	*Tumor necrosis factor*
TSB	*Tryptic Soy Broth*
TZB	*Tazobactam*
UV	*Ultraviolet.*
VAP	*Ventilator associated pneumonia*
VIM	*Verona integron-encoded metallo-β-lactamases*

List of Abbreviations (Cont...)

Abb.	Full term
Vtx	*Verotoxins*
WGS	*Whole genome sequencing*
XDR	*Extensively drug resistant*
XDRAB	*Extensively drug resistant Acinetobacter baumannii*

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