Molecular detection of multi-drug resistant *Enterococcus* spp. from poultry in Chattogram, Bangladesh

A Clinical Report Presented in Partial Fulfillment of the Requirement for the Degree of Doctor of Veterinary Medicine

Submitted by:

Nazmul Hasan

Roll No: 19/17

Registration No: 03219

Intern ID: 08

Session: 2018-19

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Khulshi, Chittagong, Bangladesh

Molecular detection of multi-drug resistant *Enterococcus* spp. from poultry in Chattogram, Bangladesh

A Clinical Report Submitted as per approved styles and contents

Approved by:

DR. Tanvir Ahmad Nizami

Lecturer

Department of Microbiology and Veterinary Public Health

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Khulshi, Chittagong, Bangladesh

December , 2024

INDEX

Contents	Page No.
Abstract	1
Chapter-I: Introduction	2-3
Chapter-II: Materials and Methods	4-7
Chapter-III: Results	8-11
Chapter-IV: Discussion	12-14
Chapter-V: Conclusion	15
Chapter-VI: References	16-19
Acknowledgement	20
Biography	21

LIST OF TABLES

Table No	Contents	Page No.
1	Oligonucleotide primer sequences used in this PCR	5
2	Quantity of reagent required for each PCR reaction	6
3	The thermocycling conditions for PCR	6
4	MDR and MAR profiles of *Enterococcus* spp. isolates	11
5	Pearson correlation coefficients between pairs of antibiotics to identify co-occurrence of resistance in *Enterococcus* spp. isolates from poultry cloacal samples	11

LIST OF FIGURES

Figure No	Contents	Page No.
1	*Enterococcus* spp. colonies on bile esculin agar	8
2	*Enterococcus* spp. colonies on blood agar	8
3	Multiplex PCR for the Detection of *Enterococcus* spp., *E. faecalis*, and *E. faecium*	9
4	Antibiotic resistance patterns of *Enterococcus* spp. isolated form cloacal samples of poultry	10