LIST OF FIGURES

Figure 1. Phylogenetic relationship of Enterococcus species based on comparative analysis of 16S rDNA sequences ........................................10

Figure 2. Pheromone-responsive conjugal system of E. faecalis .....................39

Figure 3. Antimicrobial-drug regimens for the treatment of drug resistant enterococcal infections ..........................................................49

Figure 4. Schematic diagram of the mechanism of resistance to vancomycin ....64

Figure 5. Computational Cluster analysis of WCP gels of atypical enterococcal strains .................................................................100

Figure 6. Multiplex-PCR results of HLAR strains of Enterococcus ..................122

Figure 7. Whole Plasmid DNA analysis of HLAR enterococci .......................147

Figure 8. Plasmid-restriction endonuclease analysis and Southern hybridization of HLAR enterococci .................................................148

Figure 9. Screening representative strains of Enterococcus for Bacteriocin production .................................................................166

Figure 10. “Esp” PCR results of representative test strains of Enterococcus ....166

Figure 11. Molecular Characterization of E. faecalis donors, recipients and transconjugants ..............................................................189

Figure 12. Fluorescent and Phase contrast Microscopy images of Clumping and Mating Assays of Enterococcus ..................................195

Figure 13. Smal macrorestriction analysis of HLAR Enterococci by PFGE ......209

Figure 14. Computational Cluster analysis of PFGE gels of HLAR enterococci ...211

Figure 15. Computational Cluster analysis of Plasmid RE gels of HLAR enterococci .................................................................214

Graph 1. Representation of Simpson’s index of diversity and 95% confidence intervals for Plasmid REA and PFGE analysis ......................218