

doi: 10.4081/ijfs.2025.13563

SUPPLEMENTARY MATERIAL

Seasonal prevalence and antimicrobial resistance profiles in *Enterococcus* spp. identified from mussels farmed along the coasts of the Abruzzo region

Gianluigi Ferri, Vincenzo Olivieri, Chiara Di Vittori, Alberto Vergara

Department of Veterinary Medicine, Post-Graduate Specialization School in Food Inspection “G. Tiecco”, University of Teramo, Piano d’Accio, Teramo, Italy

Correspondence: Gianluigi Ferri, Department of Veterinary Medicine, Post-Graduate Specialization School in Food Inspection “G. Tiecco”, University of Teramo, Strada Provinciale 18, 64100, Piano d’Accio, Teramo, Italy.

Tel.: +39 0861266886.

E-mail: gferri@unite.it

Key words: *Enterococcus* spp., *Mytilus galloprovincialis*, antimicrobial resistance, genetic determinants, public health.

Supplementary Table 1. Considered antibiotic resistance genes involved in the present biomolecular investigation.

Antimicrobial classes	ARGs	Oligo sequences (5'-3')	Amplicons	Ref.
Aminoglycosides	<i>aac(6')</i>	F: GAGCAATAAGGGCATAACCAAAAATC R: CCGTGCATTTGTCTTAAAAAACTGG	443 bp	Çardak <i>et al.</i> (2022)
	<i>aadA</i>	F: GTGGATGGCGGCCTGAAGCC R: AATGCCAGTCGGCAGCG	525 bp	Srinivasan <i>et al.</i> (2007) M
	<i>strA</i>	F: CTTGGTGATAACGGCAATTC R: CCAATCGCAGATAGAAGGC	348 bp	
	<i>aacC2</i>	F: CGGAAGGCAATAACGGAG R: TCGAACAGGTAGCACTGAG	428 bp	Maynard <i>et al.</i> (2004) M
	<i>aphA1</i>	F: ATGGGCTCGCGATAATGTC R: CTCACCGAGGCAGTTCCAT	600 bp	
	<i>aphA2</i>	F: GAACAAGATGGATTGCACGC R: GCTCTTCAGCAATATCACGG	510 bp	
β-lactams	<i>ampC</i>	F: TTCTATCAAMACTGGCARCC R: CCYTTTTATGTACCCAYGA	550 bp	Bailey <i>et al.</i> (2010) M
	<i>bla_{TEM}</i>	F: TTTCGTGTCGCCCTTATTCC R: CCGGCTCCAGATTTATCAGC	690 bp	
	<i>bla_z</i>	F: ACTTCAACACCTGCTGCTTTC R: TGACCACTTTTATCAGCAACC	490 bp	
Fluoroquinolones	<i>aac(6')-Ib</i>	F: TTGCGATGCTCTATGAGTGGCTA R: CTCGAATGCCTGGCGTGTTT	482 bp	Ayobola <i>et al.</i> (2021) M
	<i>qepA</i>	F: GCAGGTCCAGCAGCGGGTAG R: CTCCTGCCCGAGTATGGTG	199 bp	
	<i>qnrA</i>	F: ATTTCTCACGCCAGGATTG R: GATCGGCAAAGGTTAGGTCA	516 bp	
	<i>qnrB</i>	F: GATCGTGAAAGCCAGAAAGG R: ACGATGCCTGGTAGTTGTCC	469 bp	
	<i>qnrS</i>	F: ACGACATTCGTCAACTGCAA R: TAAATTGGCACCCCTGTAGGC	417 bp	
Glycopeptides	<i>vanA</i>	F: GCAAGTCAGGTGAAGATGGA R: GCTAATACGATCAAGCGGTC	171 bp	Nomura <i>et al.</i> (2018) M
	<i>vanB</i>	F: GATGTGTCGGTAAATCCGC R: CCACTTCGCCGACAATCAAA	271 bp	
	<i>vanC1</i>	F: GTATCAAGGAAACCTCGCGA R: CGTAGGATAACCCGACTTCCA	836 bp	
	<i>vanC2</i>	F: GCAAACGTTGGTACCTGATG R: GGTGATTTTGGCGCTGATCA	523 bp	
	<i>vanD</i>	F: TGGAATCACAAAATCCGGCG R: TWCCCGCATTTTTCACAACS	311 bp	
	<i>vanM</i>	F: GGCAGAGATTGCCAACAACA R: AGGTAAACGAATCTGCCGCT	425 bp	
	<i>vanN</i>	F: CCTCAAATCAGCAGCTAGTG R: GCTCCTGATAAGTGATACCC	941 bp	
Lincomycin	<i>ermA</i>	F: GTTCAAGAACAATCAATACAGGAG R: GGATCAGGAAAAGGACATTTTAC	421 bp	Kishk <i>et al.</i> (2020) M
	<i>ermB</i>	F: CCGTTTACGAAATTGGAACAGGTAAAGGG C R: GAATCGAGACTTGAGTGTGC	359 bp	
	<i>ermC</i>	F: GCTAATATTGTTTAAATCGTCAATTCC	572 bp	

Note: The publisher is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries should be directed to the corresponding author for the article.

		R: GGATCAGGAAAAGGACATTTTAC		
Nitrofurans	<i>nfsA</i>	F: CTGGCGCTTGCTCTGCTATC R: GCCCGCGTATCATACTACTGG	964 bp	García <i>et al.</i> (2017)
	<i>nfsB</i>	F: ATCACCGTCTCGCTACTCAAC R: CGCGCCATTGATCATTGAGG	921 bp	
Oxazolidinone	<i>cfr</i>	F: TGAAGTATAAAGCAGGTTGGGAGTC R: AACCATATAATTGACCACAAGCAGC	746 bp	Baddour <i>et al.</i> (2007) M
	<i>optrA</i>	F: TACTTGATGAACCTACTAACCA R: CCTTGAACTACTGATTCTCGG	422 bp	
	<i>poxA</i>	F: AAAGCTACCATAAAATATC R: TCATCAAGCTGTTTCGAGTTC	533 bp	
Streptogramin	<i>vatD</i>	F: TCCAGCTAACATGTATGGCG R: GCTCAATAGGACCAGGTGTA	271 bp	Shaw <i>et al.</i> (2018) M
	<i>vgaA</i>	F: AGTGGTGGTGAAGTAACACG R: CTTGTCTCCTCCGCGAATAC	659 bp	
	<i>vgaB</i>	F: TGACAATATGAGTGGTGGTG R: GCGACCATGAAATTGCTCTC	576 bp	
	<i>vgbB</i>	F: CAGCAGTCTAGATCAGAGTGG R: CATACTGGATCCATCTTTTCC	728 bp	
	<i>msrC</i>	F: AAGGAATCCTTCTCTCTCCG R: GTAAACAAAATCGTTCCCG	343 bp	
	<i>vgbA</i>	F: TACAGAGTACCCACTACCGA R: TCAATTCCTGCTCCAGCAGT	569 bp	
	<i>ermB</i>	F: CATTTAACGACGAAACTGGC R: GGAACATCTGTGGTATGGCG	424 bp	
	<i>vatE</i>	F: ACTATACCTGACGCAAATGC R: GGTTCAAATCTTGGTCCG	511 bp	
Tetracyclines	<i>tetA</i>	F: GCTACATCCTGCTTGCCTTC R: CATAGATCGCCGTGAAGAGG	210 bp	Bender <i>et al.</i> (2019) M
	<i>tetB</i>	F: TTGGTTAGGGGCAAGTTTTG R: GTAATGGGCCAATAACACCG	659 bp	
	<i>tetC</i>	F: CTTGAGAGCCTTCAACCCAG R: ATGGTCGTCATCTACCTGCC	418 bp	
	<i>tetD</i>	F: AAACCATTACGGCATTCTGC R: GACCGGATACACCATCCATC	787 bp	
	<i>tetS</i>	F: CATAGACAAGCCGTTGACC R: ATGTTTTTGGAAACGCCAGAG	667 bp	
	<i>tetK</i>	F: TATTTTGGCTTTGTATTCTTTCAT R: GCTATACCTGTTCCCTCTGATAA	1159 bp	Celli and Trieu-Cuot (1998) M
	<i>tetL</i>	F: ATAAATTGTTTCGGGTCGGTAAT R: AACCAGCCAATAATGACAATGAT	1077 bp	
	<i>tetM</i>	F: GTTAAATAGTGTTCTTGGAG R: CTAAGATATGGCTCTAACAA	657 bp	

ARGs, antibiotic resistance genes; F, forward; R, reverse; bp, base pairs; **M**, multiplex end-point PCR. All reactions were performed in agreement with the respective references.