Analysis of antimicrobial peptide expression under acute and chronic alcohol exposure: a cross-sectional study and a systematic review of the literature

Supplementary Material

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Supplementary Table 1. Forward and reverse primer sequences used for qRT-PCR.

Gene	Forward	Reerse
Human		
Cathelicidin (LL-37)	5′-GCTCCTTTGACATCAGTTG-3′	5′-GTCCTGGGTACAAGATTCC-3′
Bactericidal permeability-increasing protein (BPI)	5′-CAGGTCTGCGAGAAAGTGAC-3′	5′-AAAGGGAGGTGGATTGTGG-3′
Lipopolysaccharide binding protein (LBP)	5′-CTGCTGGCATTGCTGCTTAC-3′	5′-AGGCTGTGGAACTCATAGCG-3′
18S ribosomal RNA (18S rRNA)	5′-GGATGAGGTGGAACGTGTGA-3′	5′-CCAGACCATTGGCTAGGACC-3′
Mouse		
CRAMP/LL-37_ mouse	5′-GGCGGTCACTATCACTGCTG-3′	5′-TCGGAACCTCACAGACTTGG-3′
Liver-expressed antimicrobial peptide 1 (LEAP-1)	5′-CCTGAGCAGCACCACCTATC-3′	5′-GCAACAGATACCACACTGGGA-3′
Liver-expressed antimicrobial peptide 2 (LEAP-2)	5′-CTGCTGGGTCAGGTCAATAGT-3′	5′-GTATGGACATCACTCCTGGGC-3′
Regenerating family member 3 alpha (REG3A)	5′-GCTTATCGCTCCCACTGCTA-3′	5′-GGTAGTTGTCCACTCTGCCG-3′
Regenerating islet-derived protein 3-gamma (REG3G)	5′-CCGACACTGGGCTATGAACC-3′	5′-TGGGATCTTGCTTGTGGCTA-3′
Alpha-defensin 1 (DEFA1)	5′-GCTGCCTGCTCATCCTAATCCAT-3	5′-GGATAGAATCAGCCTGGACCTG-3′
Alpha-defensin 2 (DEFA2)	5′-GCTCAGGACGACTTTTGTTC	5′-CAATTTATTGAGAAGTGGTTATCA-3′
Alpha-defensin 3 (DEFA3)	5′-TCGCTGAACATGGAGACCAC	5′-CGAGGTAGTCATCAGGCACC
B-defensin 2 (DEFB2)	5′-TGGAGTCTGAGTGCCCTTTC-3′	5′-AGTGGTCAAGTTCTGCTTCGT-3′
B-defensin 1 (DEFB1)	5′-ACATCTGCCTGGTCCTGAGT-3′	5′-GGAAGCCTGTGTACCGTGTT-3′
LPB_mouse	5′GACCTGGACTTGACTCCGTC-3′	5′ACAGTGCCCGCTCTTAAAGT-3′
Lipocalin-2 (LCN2)	5′GCCCTGAGTGTCATGTGTCT-3′	5′-ACAACGTACCACCTGCCCC-3′
TATA-box binding protein (TBP)	5′-GAAGCTGCGGTACAATTCCAG-3′	5′-CCCCTTGTACCCTTCACCAAT-3′
Hypoxanthine phosphoribosyltransferase (Hprt)	5′-GCCTTCCCGCTCTACTGAAA-3′	5′-GCTCAGCACACCTACCTACG-3′
Serine and arginine-rich splicing factor 4 (SRSF4)	5′-GCCTTCCCGCTCTACTGAAA-3′	5′-GCTCAGCACACCTACCTACG-3′

Supplementary Section S1. Search strategies

Scopus on 22-11-2025:

#1	("antimicrobial peptide" OR "AMPs" OR "host defense peptide" OR "HDPs" OR "bactericidal peptide" OR "antimicrobial cationic peptide" OR "defensin" OR "cathelicidin" OR “REG3” OR “regenerating islet-derived protein 3”)	
#2	("alcohol" OR "ethanol" OR "alcohol use disorder" OR “Alcohol-Related Disorders" OR "alcohol exposure" OR "alcohol abuse" OR "chronic alcoholic intoxication" OR "alcohol dependence" OR "alcohol addiction" OR “alcohol intake” OR "acute alcohol consumption" OR "excessive ethanol intake" OR “alcoholism" OR "binge drinking" OR "alcoholic intoxication" OR "Alcohol Drinking" OR “Alcohol Misuse”)	
#3	("biomarker" OR “expression”)	
#4	#1 AND #2 AND #3	1680

Web of Science on 22-11-2025:

#1	("antimicrobial peptide" OR "AMPs" OR "host defense peptide" OR "HDPs" OR "bactericidal peptide" OR "antimicrobial cationic peptide" OR "defensin" OR "cathelicidin")	
#2	("alcohol" OR "ethanol" OR "alcohol use disorder" OR “Alcohol-Related Disorders" OR "alcohol exposure" OR "alcohol abuse" OR "chronic alcoholic intoxication" OR "alcohol dependence" OR "alcohol addiction" OR “alcohol intake” OR "acute alcohol consumption" OR "excessive ethanol intake" OR “alcoholism" OR "binge drinking" OR "alcoholic intoxication" OR "Alcohol Drinking" OR “Alcohol Misuse”)	
#3	("biomarker" OR “expression”)	
#4	#1 AND #2 AND #3	89

Pubmed on 22-11-2025:

#1	"antimicrobial peptide*"[tiab] OR "AMPs"[tiab] OR "host defense peptide*"[tiab] OR "HDPs"[tiab] OR "bactericidal peptide*"[tiab] OR "antimicrobial cationic peptide*"[tiab] OR "defensin*"[tiab] OR "cathelicidin*"[tiab] OR "gene expression"[tiab] OR "expression profile*"[tiab] OR "expression analys*"[tiab] OR "mRNA expression"[tiab] OR "Antimicrobial Cationic Peptides"[Mesh] OR "Defensins"[Mesh] OR "Cathelicidins"[Mesh] OR "Gene Expression"[Mesh]
#2	("alcohol*"[tiab] OR "ethanol"[tiab] OR "alcohol use disorder"[tiab] OR "AUD"[tiab] OR "alcohol consumption"[tiab] OR "alcohol intake"[tiab] OR "alcohol exposure"[tiab] OR "alcohol abuse"[tiab] OR "alcohol dependence"[tiab] OR "alcohol

	addiction"[tiab] OR "alcoholism"[tiab] OR "alcoholic intoxication"[tiab] OR "chronic alcoholic intoxication"[tiab] OR "binge drinking"[tiab] OR "alcohol misuse"[tiab] OR "Alcohol Drinking"[Mesh] OR "Alcoholism"[Mesh] OR "Alcohol-Related Disorders"[Mesh] OR "Ethanol"[Mesh] OR "Alcoholic Intoxication"[Mesh] OR "Binge Drinking"[Mesh])	
#3	("biomarker*"[tiab] OR "Biomarkers"[Mesh] OR "Biological Markers"[Mesh])	
#4	#1 AND #2 AND #5	1102