

Supplementary data

Isolation and identification of probiotic strains

The Probiotic A4 was isolated from the fermented food Aakhone and, this isolate was able to produce antimicrobial compound, which displayed broad spectrum of inhibitory activity against variety of pathogenic and non-pathogenic microorganisms. These strain was taxonomically identified by physiological tests and was found to be a gram- positive coccus, nonmotile, nonsporulating and catalase negative. The partial sequencing of 16S rRNA gene sequence was performed by MACROGEN and sequence similarity search was carried out using BLASTn. Sequences of closely related taxa were retrieved and aligned using MEGA4: Molecular Evolutionary Genetics Analysis (MEGA) software version 4.0. Identified probiotic strain is *Enterococcus faecalis*.

16s rRNA Sequence of A4:

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TCAGCGTACTGTCGCGTAGCTGATATATGGGAGTCGGATCGCTTCTTTCC
TCCCGAGTGCTTGCACTCAATTGGAAAGAGGAGTGGCGGACGGGTGAGTA
ACACGTGGGTAACCTACCCATCAGAGGGGGATAACACTTGGAACAGGTG
CTAATACCGCATAACAGTTTATGCCGCATGGCATAAGAGTGAAAGGCGCT
TTCGGGTGTCGCTGATGGATGGACCCGCGGTGCATTAGCTAGTTGGTGAG
GTAACGGCTCACCAAGGCCACGATGCATAGCCGACCTGAGAGGGTGATCG
GCCACACTGGGACTGAGACACGGCCCAGACTCCTACGGGAGGCAGCAGTA
GGGAATCTTCGGCAATGGACGAAAGTCTGACCGAGCAACGCCGCGTGAGT
GAAGAAGGTTTTTCGGATCGTAAAACTCTGTTGTTAGAGAAGAACAAGGAC
GTTAGTAACTGAACGTCCCCTGACGGTATCTAACCAGAAAGCCACGGCTA
ACTACGTGCCAGCAGCCGCGGTAATACGTAGGTGGCAAGCGTTGTCCGGA
TTTATTGGGCGTAAAGCGAGCGCAGGCGGTTTCTTAAGTCTGATGTGAAA
GCCCCCGGCTCAACCGGGGAGGGTCATTGGAAACTGGGAGACTTGAGTGC
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GGCTCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACG
CCGTAAACGATGAGTGCTAAGTGTTGGAGGGTTTCCGCCCTTCAGTGCTG
CAGCAAACGCATTATTCACCTCCGTCTGGTGAGCACTACCGCACTCGATGA
AACTCAAAAGAATTGACCGGGGGCCCGCACAAGCGGTGGAGCATGTGGTT
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CCACTCTAGAGATACATCTTTTCTTTCGGGGAAAAAAGTGCGAGGTGGCT
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GATGGGTTGTCGTCAGCTTCGTGTCCCCGAGAAGGGGGGGTTAAGCTCCC
GCA