



TECHNOLOGY

Broad spectrum antibacterial therapeutic peptides of probiotic origin

OVERVIEW

Bacterial diarrhea still remains the second leading cause of deaths globally, accounting for one fifth of all deaths among children under five. Small bioactive peptides with **both Gram-positive and Gram-negative bactericidal activity** have been isolated from Lactobacillus GG. These peptides have broad-spectrum antibacterial properties against enteric bacterial pathogens. Of the 7 peptides isolated and characterized by the inventors, the peptide NPSRQERR showed the highest antibacterial potency, both for Gram-negative and Gram-positive bacteria. Additionally, these peptides are **thermostable**, which enhances their stability during manufacturing, processing and storage. These peptides show strong efficacy against Gram-negative (*Escherichia coli* EAEC 042 and *Salmonella typhi*) and somewhat lesser potency against Gram-positive (*Staphylococcus aureus*) bacteria.

A suitable peptide formulation for delivery to gastrointestinal tract needs to be addressed before possible clinical applications.

Publication(s):

Lu R et al, J Pediatr Gastroenterol Nutr. 2009 Jul; 49(1): 23-30

LICENSING POTENTIAL

Available for licensing

CONTACT INFO

Office of Technology Transfer
620 W Lexington St., 4th Floor
Baltimore, MD 21201
Email: ott@umaryland.edu
Phone: (410) 706-2380

Additional Information

INSTITUTION

University of Maryland, Baltimore

PATENT STATUS

US Patent issued: US8431528

CATEGORIES

- Therapeutics

- Biologics

INVESTIGATOR(S)

Alessio Fasano
Ruijiang Lu

SF-2006-008