NDRI Studies on Microbiota and Health

Sunita Grover

ICAR - National Dairy Research Institute
Karnal-132001

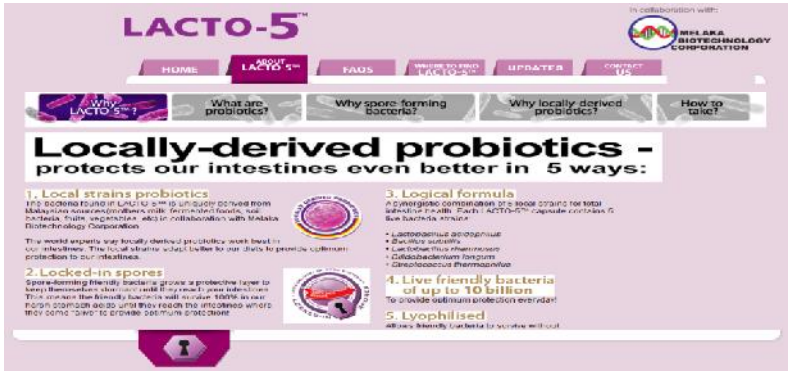
Japan

L.casei strain Shirota

European Countries

LGG

Bb12



India

OPEN ACCESS Freely available online

PLoS one

Functional and Probiotic Attributes of an Indigenous Isolate of *Lactobacillus plantarum*

Jai K. Kaushik[1]*, Ashutosh Kumar[2¤], Raj K. Duary[2], Ashok K. Mohanty[1], Sunita Grover[2], Virender K. Batish[2]*

1 Animal Biotechnology Centre, National Dairy Research Institute, Karnal, India, 2 Molecular Biology Unit, Dairy Microbiology Division, National Dairy Research Institute, Karnal, India

Probiotic lactobacilli were isolated and studied for probiotic attributes
Acid and Bile tolerance
Hydorphobicity
Adhesion on Caco-2 and HT-29 cell lines
Aggregation and co-aggregation potential
Anti-oxidative potential

Probiotics and Antimicrobial Proteins
December 2011, Volume 3, Issue 3, pp 186–193

Molecular Identification and Typing of Putative Probiotic Indigenous *Lactobacillus plantarum* Strain Lp91 of Human Origin by Specific Primed-PCR Assays

Authors | Authors and affiliations

Rajesh Kumar, Sunita Grover, Virender Kumar Batish

Mol Biol Rep (2012) 39:7887–7897
DOI 10.1007/s11033-012-1633-9

Antioxidative potential of lactobacilli isolated from the gut of Indian people

Anju A. Achuthan · Raj Kumar Duary · Anupama Madathil · Harsh Panwar · Himanshu Kumar · Virender Kumar Batish · Sunita Grover

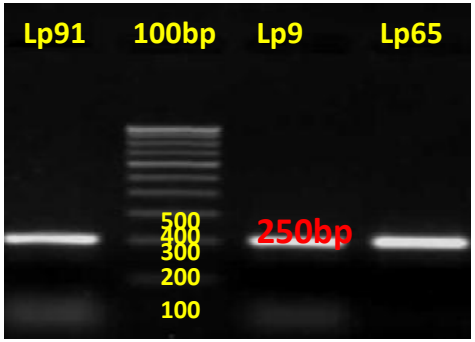
Most extensively studied probiotic lactobacillus strains

- ***Lactobacillus plantarum*** **Lp91 - Lp91 (MTCC 5690)**
- ***Lactobacillus fermentum*** **Lf1 - Lf1 (MTCC 5689)**
- ***Lactobacillus casei*** **Lbs2 – MTCC 5953**
- ***Lactobacillus fermentum*** **Lbs4 – MTCC 5954**

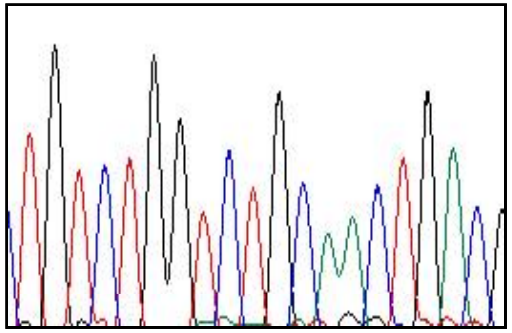
Identification of probiotic lactobacilli strains

Isolated from the faecal matter of healthy adults

Identification



Genus and Species specific PCR



16S r RNA gene sequencing

Strains Characterized by RAPD and MLST profile

Draft Genome Sequence of *Lactobacillus plantarum* Strain Lp91, a Promising Indian Probiotic Isolate of Human Gut Origin

Sunita Grover,[a] Vineet K. Sharma,[b] Rashmi H. Mallapa,[a] Virender K. Batish[a]

Draft Genome Sequence of *Lactobacillus fermentum* Lf1, an Indian Isolate of Human Gut Origin

Sunita Grover,[a] Vineet K. Sharma,[b] Rashmi H. Mallapa,[a] Virender K. Batish[a]

ELSEVIER

INSTITUT PASTEUR

Research in Microbiology 161 (2010) 399–405

www.elsevier.com/locate/resmic

Expression of the *atpD* gene in probiotic *Lactobacillus plantarum* strains under *in vitro* acidic conditions using RT-qPCR

Raj Kumar Duary, Virender Kumar Batish**, Sunita Grover*

Molecular Biology Unit, Dept. of Dairy Microbiology, National Dairy Research Institute, Karnal, Haryana 132001, India

Received 16 February 2010; accepted 29 March 2010
Available online 21 April 2010

Expression of genes involved in probiosis was studied using RT-qPCR

Mol Biol Rep
DOI 10.1007/s11033-011-1006-9

Relative gene expression of bile salt hydrolase and surface proteins in two putative indigenous *Lactobacillus plantarum* strains under in vitro gut conditions

Raj Kumar Duary · Virender Kumar Batish · Sunita Grover

MICRES-25564; No. of Pages 8

Microbiological Research xxx (2013) xxx–xxx

Contents lists available at SciVerse ScienceDirect

Microbiological Research

journal homepage: www.elsevier.com/locate/micres

ELSEVIER

Relative expression of bacterial and host specific genes associated with probiotic survival and viability in the mice gut fed with *Lactobacillus plantarum* Lp91

Archana Chandran[a], Raj Kumar Duary[b], Sunita Grover[a,**], Virender Kumar Batish[a,*]

[a] Molecular Biology Unit, Department of Dairy Microbiology, National Dairy Research Institute, Karnal, Haryana 132 001, India
[b] Department of Food Engineering and Technology, Tezpur University, Napaam, Assam 784 028, India

Hypocholesterolemic and anti-inflammatory effects of probiotic lactobacilli

British Journal of Nutrition (2010), page 1 of 12
doi:10.1017/S0007114510003740
© The Authors 2010

Hypocholesterolaemic effect of dietary inclusion of two putative probiotic bile salt hydrolase-producing *Lactobacillus plantarum* strains in Sprague–Dawley rats

Rajesh Kumar[1,2], Sunita Grover[1] and Virender Kumar Batish[1]*

[1]*Molecular Biology Unit, Dairy Microbiology Division, National Dairy Research Institute, Karnal 132001, Haryana, India*
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(Received 14 April 2010 – Revised 6 August 2010 – Accepted 25 August 2010)

Genes Nutr (2014) 9:398
DOI 10.1007/s12263-014-0398-2

RESEARCH PAPER

Immunomodulatory activity of two potential probiotic strains in LPS-stimulated HT-29 cells

Raj Kumar Duary · Virender Kumar Batish · Sunita Grover

Genes Nutr (2013) 8:637–648
DOI 10.1007/s12263-013-0347-5

RESEARCH PAPER

Modulation of anti-inflammatory response in lipopolysaccharide stimulated human THP-1 cell line and mouse model at gene expression level with indigenous putative probiotic lactobacilli

V. Aparna Sudhakaran · Harsh Panwar · Ritu Chauhan · Raj Kumar Duary · Rahul Kumar Rathore · Virender Kumar Batish · Sunita Grover

Mol Biol Rep
DOI 10.1007/s11033-011-1269-1

Anti-inflammatory and immunomodulatory efficacy of indigenous probiotic *Lactobacillus plantarum* Lp91 in colitis mouse model

Raj Kumar Duary · Mache Amit Bhausaheb · Virender Kumar Batish · Sunita Grover

Hindawi Publishing Corporation
BioMed Research International
Volume 2014, Article ID 206732, 12 pages
http://dx.doi.org/10.1155/2014/206732

Hindawi

Research Article

Amelioration of Colitis in Mouse Model by Exploring Antioxidative Potentials of an Indigenous Probiotic Strain of *Lactobacillus fermentum* Lf1

Ritu Chauhan,[1] Aparna Sudhakaran Vasanthakumari,[1] Harsh Panwar,[1] Rashmi H. Mallapa,[1] Raj Kumar Duary,[2] Virender Kumar Batish,[1] and Sunita Grover[1]

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Correspondence should be addressed to Sunita Grover; sungro@gmail.com

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Contents lists available at ScienceDirect

International Immunopharmacology

journal homepage: www.elsevier.com/locate/intimp

Live and heat-killed probiotic *Lactobacillus casei* Lbs2 protects from experimental colitis through Toll-like receptor 2-dependent induction of T-regulatory response

CrossMark

Bhupesh Kumar Thakur [a,1], Piu Saha [a,1], George Banik [b], Dhira Rani Saha [a], Sunita Grover [c], Virender Kumar Batish [c], Santasabuj Das [a,*]

[a] *National Institute of Cholera & Enteric Diseases (ICMR), Clinical Medicine, P-33, CIT Road, Scheme-XM, Beliaghata, Kolkata 700010, West Bengal, India*
[b] *BD Biosciences, Salt Lake, Kolkata 700102, India*
[c] *Molecular Biology Unit, Dairy Microbiology Department, National Dairy Research Institute, Karnal, Haryana 132001, India*

Eur J Nutr
DOI 10.1007/s00394-013-0649-9

ORIGINAL CONTRIBUTION

Lactobacillus strains isolated from infant faeces possess potent inhibitory activity against intestinal alpha- and beta-glucosidases suggesting anti-diabetic potential

Harsh Panwar · Danielle Calderwood · Irene R. Grant · Sunita Grover · Brian D. Green

Annals of Microbiology
March 2016, Volume 66, Issue 1, pp 505–509

Lactobacilli possess inhibitory activity against dipeptidyl peptidase-4 (DPP-4)

Authors Authors and affiliations

Harsh Panwar, Danielle Calderwood, Irene R. Grant, Sunita Grover, Brian D. Green

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Journal of Functional Foods

Volume 23, May 2016, Pages 348–358

Identification of lactic acid bacteria strains modulating incretin hormone secretion and gene expression in enteroendocrine cells

Harsh Panwar[a, b, 1], Danielle Calderwood[a], Anna L. Gillespie[a], Alastair R. Wylie[c], Stewart F. Graham[d], Irene R. Grant[a], Sunita Grover[e], Brian D. Green[a,]

Show more

Eur J Nutr
DOI 10.1007/s00394-016-1317-7

ORIGINAL CONTRIBUTION

Improvement in glucose tolerance and insulin sensitivity by probiotic strains of Indian gut origin in high-fat diet-fed C57BL/6J mice

Mahalingam Balakumar[1] · Durai Prabhu[1] · Chandrakumar Sathishkumar[1] · Paramasivam Prabu[1] · Namita Rokana[2] · Ramesh Kumar[1] · Srividhya Raghavan[1] · Avinash Soundarajan[1] · Sunita Grover[2] · Virender Kumar Batish[2] · Viswanathan Mohan[1] · Muthuswamy Balasubramanyam[1]

LWT - Food Science and Technology

Available online 17 August 2016

In Press, Accepted Manuscript — Note to users

Interaction between putative probiotic *Lactobacillus* strains of Indian gut origin and *Salmonella*: Impact on intestinal barrier function

Namita Rokana, Rashmi Hogarehalli Mallappa, Virender Kumar Batish, Sunita Grover

Show more

Journal of Medical Microbiology (2016), 65, 1–12 DOI 10.1099/jmm.0.000366

Modulation of intestinal barrier function to ameliorate *Salmonella* infection in mice by oral administration of fermented milks produced with *Lactobacillus plantarum* MTCC 5690 – a probiotic strain of Indian gut origin

Namita Rokana, Rajbir Singh, Rashmi Hogarehalli Mallappa, Virender Kumar Batish and Sunita Grover

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Contents lists available at ScienceDirect

Regulatory Toxicology and Pharmacology

journal homepage: www.elsevier.com/locate/yrtph

Assessing safety of *Lactobacillus plantarum* MTCC 5690 and *Lactobacillus fermentum* MTCC 5689 using *in vitro* approaches and an *in vivo* murine model

Diwas Pradhan[a], Rajbir Singh[b], Ashish Tyagi[a,b], Rashmi H.M.[a], V.K. Batish[a], Sunita Grover[a,*]

[a] Molecular Biology Unit, Dairy Microbiology Division, ICAR-National Dairy Research Institute, Karnal, 132001, Haryana, India
[b] University of Louisville, 505 South Hancock Street # 323, Clinical Translational Research Bldg, Louisville, KY, 40202, USA

Probiotics and Antimicrobial Proteins
https://doi.org/10.1007/s12602-018-9489-5

Assessing the Safety and Efficacy of *Lactobacillus plantarum* MTCC 5690 and *Lactobacillus fermentum* MTCC 5689 in Colitis Mouse Model

Diwas Pradhan[1] · Rajbir Singh[2] · Ashish Tyagi[1,2] · Rashmi H.M.[1] · Virender K. Batish[1] · Sunita Grover[1]

Metagenomic studies at NDRI

- **Comparative metagenome of human gut of North and North-Eastern regions of India**
- **Comparative analysis of predominant gut microflora in autistic versus normal children for probiotic interventions**
- **Comparative Abundance of *Faecalibacterium prausnitzii* in Diabetic and Non Diabetic hosts of Indian Population**
- **Comparative abundance of major gut enterotypes in children of varying nutritional status**


Thank You