CURRICULUM VITAE
PRASHANT SINGH

Personal

Mailing Address: Department of Nutrition, Food and Exercise Sciences
416 Sandels Building, 120 Convocation Way
Florida State University
Tallahassee, FL 32306-1493

Telephone: 850.644.1829

E-mail: psingh2@fsu.edu

Education

2015 **Ph.D.** University of Missouri, Columbia, MO (Major: Food Science)

2015 **Food Safety and Defense Graduate Certificate Program**, University of Missouri, Columbia, MO

2006 **M.S.** Vellore Institute of Technology, TN, India (Major: Applied Microbiology)

2004 **B. S. (Honors)** Delhi University, Delhi, India (Major: Botany)

Key Interest

I have conducted research in the area of food microbiology. Emphasis of my past research has been: food safety, detection of foodborne pathogens, development of effective intervention treatment for beef and produce safety.

Professional Experience

- **Assistant Professor,** Department of Nutrition, Food and Exercise Sciences, Florida State University (2017 – Present)
- **Postdoctoral Research Associate,** Department of Food Science and Technology, University of Georgia (2015 – 2017)
- **Graduate Research Assistant**, Department of Food Science, University of Missouri, Columbia, MO (2010 – 2015)
- **Graduate Teaching Assistant**, Department of Food Science, University of Missouri, Columbia, MO (2012 – 2014)
- **Senior Research Fellow**, Dairy Microbiology Division, National Dairy Research Institute (**NDRI**), Karnal, India (2008 – 2009)
- **Senior Research Fellow**, National Bureau of Animal Genetic Resources (**NBAGR**), Karnal, India. (2006 – 2008)

Patent

Patent application submitted (Patent number 20160032366): The patent application comprises of three assays: **(1)** Melting Curve for real-time PCR assay to rapidly detect eight Shiga Toxin-producing *Escherichia coli*. **(2)** Multiplex real-time PCR assay for the detection of extended-spectrum β-lactamase (ESBL) and carbapenemase genes using melting curve analysis. **(3)** High-resolution melt assay for specific identification of *E. coli* O157.

Fellowship and Awards

- **Student Travel Award**, Department of Food Science, University of Missouri (2014)
- **Mizzou Advantage Student Travel Award,** University of Missouri (2014)
- **Feeding Tomorrow, Graduate Scholarship -2014,** Institute of Food Technologists (IFT)
- **Marion L. Fields Graduate Fellowship**, 2013. Department of Food Science, University of Missouri
- Placed 3rd in evaluation of Ice cream and Cottage Cheese in the **91st Annual Collegiate Dairy Products Evaluation Contest (National),** Springfield, MO, USA (Nov, 2012)
- **Faye W. Furguson Scholarship, 2011 and 2012**. Department of Food Science, University of Missouri
- 2nd prize, **IFT AAFSIS poster competition,** annual IFT meeting, New Orleans (2011)
- **Italian Government Scholarships 2009-2010.** The scholarship offered for the academic year 2009-2010 to work at the University of Bari, Italy for **8 months** (Did not avail)

Publications

Peer-Reviewed:

- Tian, K., Chen, X., Luan, B., **Singh, P**., Yang, Z., Gates, K. S., ... & Gu, L. Q. (2018). Single Locked Nucleic Acid-Enhanced Nanopore Genetic Discrimination of Pathogenic Serotypes and Cancer Driver Mutations. ACS Nano, 12(5), 4194-4205.
- **Singh, P**., Hung, Y. C., & Qi, H. (2018). Efficacy of Peracetic Acid in Inactivating Foodborne Pathogens on Fresh Produce Surface. Journal of food science, 83(2), 432-439.
- Liu, Y., **Singh, P**., & Mustapha, A. (2018). Multiplex high resolution melt-curve real-time PCR assay for reliable detection of Salmonella. Food Control, 91, 225-230.
- Liu, Y., **Singh, P**., & Mustapha, A. (2018). High-resolution melt curve PCR assay for specific detection of E. coli O157: H7 in beef. Food Control, 86, 275-282.
- Ouf, J.M.M., Yuan Y., **Singh, P**., Mustapha, A. (2017). Detection of viable but nonculturable *Escherichia coli* O157:H7 in ground beef by propidium monoazide real-time PCR. International Journal of Agricultural Science and Food Technology 3(2), 026-031.

- **Singh, P**., Pfeifer, Y., Mustapha, A. (2016). Multiplex real-time PCR assay for the detection of extended-spectrum β-lactamase (ESBL) and carbapenemase genes using melting curve analysis. Journal of Microbiological Methods, 124, 72-78.
- Forghani, F., **Singh, P**., & Oh, D. H. (2015). A Novel Pentaplex Real Time (RT)-PCR High Resolution Melt Curve Assay for Simultaneous Detection of Emetic and Enterotoxin Producing *Bacillus cereus* in Food. Food Control, 60, 560-568.
- **Singh, P**., & Mustapha, A. (2015). Multiplex real-time PCR assays for detection of eight Shiga toxin-producing *Escherichia coli* in food samples by melting curve analysis. International Journal of Food Microbiology, 215, 101-108.
- Pophaly, S. D., Poonam., **Singh, P**., Kumar, H., Tomar, S. K., Singh, R. (2014). Selenium enrichment of lactic acid bacteria and Bifidobacteria: A functional food perspective. Trends in Food Science and Technology, 39(2), 135-145.
- Kaliyaperumal, A., Nanda, D. K., UmaMaheswari, T., Thiagaraja, H., **Singh, P.**, Singh, R. (2014). Assessment of expression of Leloir pathway genes in wild type galactose fermenting *Streptococcus thermophilus* by real time PCR. European Food Research and Technology, 239(5), 895-903.
- Blumhagen, A., **Singh, P**., Mustapha, A., Yu, Q. (2014). Plasma Deactivation of Oral Bacteria Seeded on Hydroxyapatite Disks as Tooth Enamel Analogue. American Journal of Dentistry, 27(2), 84-90.
- **Singh, P**., & Mustapha, A. (2014). Development of a real-time PCR melt curve assay for simultaneous detection of virulent and antibiotic resistant *Salmonella*. Food Microbiology, 44,6-14.
- Kaliyaperumal, A., UmaMaheswari, T., Thiagaraja, H., Nanda, D. K., **Singh, P**., Singh, R. (2014). Preparation of low galactose yogurt using cultures of Gal^+ *Streptococcus thermophilus* in combination with *Lactobacillus delbrueckii ssp. bulgaricus*. Journal of Food Science and Technology, 51(9), 2183-2189.
- UmaMaheswari, T., Singh, R., **Singh, P**., Tomar, S. K. (2014). Polyphasic characterization, phylogenetic analysis and technological properties of *Streptococcus thermophilus* strains isolated from plant sources. International Journal of Dairy Technology, 67(1), 117-122
- **Singh, P**., & Mustapha, A. (2013). Multiplex TaqMan Detection of Pathogenic and Multi-Drug Resistant *Salmonella*. International Journal of Food Microbiology, 166(2), 213-218.
- Anbukkarasi, K., UmaMaheswari, T., Hemalatha, T., Nanda, D., **Singh, P**., Rashmi, H. M., & Singh, R. (2013). Production of low browning Mozzarella cheese: Screening and characterization of wild galactose fermenting *Streptococcus thermophilus* strains. International Journal of Advanced Research, 1, 83-96.
- Iyer, R., Tomar, S. K., Mohanty, A. K., **Singh, P**., Singh, R. (2011). Bioprospecting *Streptococcus thermophilus* strains from Indian fermented milk products for folate production. Dairy Science & Technology 91(2), 237-246.

- Nanda, D. K., Tomar, S. K., Singh, R., Mal, G., **Singh, P**., Arora, D. K., Joshi, B. K., Kumar, D. (2011). Phenotypic and genotypic characterization of Lactobacilli isolated from Camel Cheese produced in India. International Journal of Dairy Technology, 64(3), 437-443.
- Jain, A., Gour, D. S., Bisen, P. S., **Prashant**., Dubey, P. P., Sharma, D. K., Joshi, B. K., Kumar, D. (2009). Single Nucleotide Polymorphism in Alpha Lactalbumin 1 Gene of Jamunapari goat. Small Ruminant Research, 82, 156-160.
- **Prashant**., Tomar, S. K., Singh, R., Gupta, S. C., Joshi, B. K., Arora, D. K., Kumar, D. (2009). Phenotypic and Genotypic characterization of *Lactobacillus* from Churpi Cheese. Dairy Science and Technology, 89, 531-540.
- Jain A., Gour D. S., Dubey P. P., **Prashant**, Bisen P. S., Kumar D. (2008). Single Strand Confirmation Polymorphism (SSCP) detection in alpha-lactalbumin Gene of Indian Jakhrana milk goats. Acta Agri Scand A Animal Science, 58, 205-208.
- **Prashant**, Gour D. S., Dubey P. P., Jain A., … & Kumar, D. (2008). Sex Determination in 6 Bovid Species by Duplex PCR. Journal of Applied Genetics, 49(4), 379-381.

Book chapter:

- **Singh, P**., Gao, F., Bernat, A. **(2017).** Nanobodies and their in vivo applications. Advanced Biosensors for Health Care Applications. (Accepted Manuscript)
- Mustapha, A., & **Singh, P**. (2013). Applications of molecular-based foodborne pathogen detection. In: Microbial Food Safety and Preservation Techniques. Editors: V Ravishankar Rai and A Jamuna Bai. CRC Press/Taylor & Francis Group ISBN: 9781466593060 (*Invited*)
- **Prashant**., Pophaly, S. D., Tomar, S. K. (2011). Production of functional biomolecules by Propioniobacteria. In: *Functional Dairy Foods: Concepts and applications.* Eds. Tomar, S. K., Singh, R., Singh, A. K., Arora, S., Singh, R. R. B. Delhi: Satish Serial Publishing House. pp. 347-355. ISBN 81- 89304-90-9
- Pophaly, S. D., **Prashant***., Singh, A. K., Tomar, S. K., Singh, R. (2011). Safety aspects of probiotics. In: *Functional Dairy Foods: Concepts and applications.* Eds. Tomar, S. K., Singh, R., Singh, A. K., Arora, S., Singh, R. R. B. Delhi: Satish Serial Publishing House. pp. 367-388. ISBN 81- 89304-90-9

Poster Presented in Conferences

- **Singh, P.**, Hung, YC. A Multiple Hurdle Carcass Washing Protocol for Inactivating Shiga Toxin-Producing *Escherichia coli* on Beef. 2017, IAFP Annual Meeting, 9 -12th July, Tampa, Florida, USA
- **Singh, P.**, Hung, YC., Qi, H. Efficacy of Peroxyacetic Acid and Other Sanitizers for Ensuring Produce Safety. 2017, IAFP Annual Meeting, 9 -12th July, Tampa, Florida, USA
- Liu, Y., **Singh, P.**, Mustapha, A. High-Resolution Melt Curve PCR Assay for Detection of *E. coli* O157:H7 in Beef. 2017, IAFP Annual Meeting, 9 -12th July, Tampa, Florida, USA

- Liu, Y., **Singh, P.**, Mustapha, A. Multiplex Real-time PCR Assay for Reliable Detection of *Salmonella*. 2016, IAFP Annual Meeting, 30th July – 3rd August, St. Louis, Missouri, USA
- **Singh, P.**, Mustapha, A. Detection of Shiga toxin producing *Escherichia coli*, seven stx subtypes and *Salmonella* via a two-tiered multiplex real-time PCR. 2015, IAFP Annual Meeting, July 25 - 28, Portland, Oregon, USA
- Gao, F., Yu, H., Shen, Z., **Singh, P**., Xu, Y., Sun, H., Mustapha, A. Influence of Novel Chemical Compounds on Virulence Gene Expression by Shiga Toxin-Producing *Escherichia coli*. 2014, IAFP Annual Meeting, Aug 3 - 6, Indianapolis, Indiana, USA
- Kang, J.**,** Yoo, A., **Singh, P**., Mustapha, A. Differentiation of colony morphology of Shiga toxin producing *Escherichia coli* on commercial agar media. 2014, IAFP Annual Meeting, Aug 3 - 6, Indianapolis, Indiana, USA
- **Singh, P.**, & Mustapha, A. Multiplex Real-time PCR Assay for Detection of Eight STEC Serotypes. 2014, IAFP Annual Meeting, Aug 3 - 6, Indianapolis, Indiana, USA
- **Singh, P**., & Mustapha, A. Pentaplex TaqMan Assay for the Detection of Pathogenic and Multidrug Resistant Strains of *Salmonella*. 2012, IAFP Annual Meeting, July 22 - 25, Providence, Rhode Island, USA
- UmaMaheswari, T., Singh, R., **Prashant**., Tomar, S. K. Evaluation of genotypic heterogeneity of *Streptococcus thermophilus* strains isolated from dairy and plant sources in India. 2011, IFT Annual Meeting, June 11 - 14, New Orleans, LA, USA
- Yang, J., **Prashant**., Liu, Y., Sun, F., Mustapha, A. Phenotypic genotypic and physiological characterization of lactic acid bacteria from Chinese yak milk cheeses. 2011, IFT Annual Meeting, June 11 - 14, New Orleans, LA, USA
- **Prashant**., Wang, L., Mustapha, A. Molecular and virulence characterization and detection of multi-drug resistant *Salmonella* strains from food and farm. 2011, IFT Annual Meeting, June 11 - 14, New Orleans, LA, USA
- UmaMaheswari, T., Singh, R., Rani, P., **Prashant**., Anbukkarasi, K., Tomar, S. K. Genetic diversity of *Streptococcus thermophilus* strains isolated from plant sources. P.No-299; Conference on Environmental, Industrial and Applied Microbiology (BioMicroWorld2009), 2-4 December, Lisbon (Portugal).

Professional Societies

- Member of Institute of Food Technologist
- Member of International Association for Food Protection