
ANKITA PAGEDAR SINGH

Office:

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Residence:

w/o Dr. Jitender Singh, Scientist-II,
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Board, Anand, Gujarat, India-388001

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EDUCATION

- ◆ Doctorate – Microbiology (2008) **NATIONAL DAIRY RESEARCH INSTITUTE (NDRI)**, Karnal, Haryana, India
Research Project Title: Development of multiple resistances and their transfer in potential foodborne pathogens within contact surface *BIOFILMS*
- ◆ Post Graduation – Microbiology (2004) **KURUKSHETRA UNIVERSITY**, Kurukshetra, Haryana, India
- ◆ Graduation – Life Sciences (2002) **GOVERNMENT P.G. COLLEGE**, Karnal, Haryana, India
- ◆ Schooling (1986 – 1998) **ST. JOSEPH'S SENIOR SECONDARY GIRLS' CONVENT SCHOOL**, Bhopal, Madhya Pradesh, India

EXPERIENCE

- * Assistant Professor (Mar 2013- till date)
AD PATEL INSTITUTE OF TECHNOLOGY, Vallabh Vidya Nagar, Gujarat (Affiliated to Gujarat Technological University, Ahmedabad, Gujarat, India), (ISO 9001-2015 certified; NBA accredited 2019-2022)
- * Assistant Professor (June 2010- Feb 2013)
ASHOK & RITA PATEL INSTITUTE OF INTEGRATED STUDY & RESEARCH IN BIOTECHNOLOGY & ALLIED SCIENCES, NEW Vallabh Vidya Nagar, Gujarat (Affiliated to Sardar Patel University, Vallabh Vidya Nagar)
- * Postdoctorate Research Associate (Jan 2009- Mar 2009)
DEPTT. OF DAIRY MICROBIOLOGY, SOUTH DAKOTA STATE UNIVERSITY, Brookings, South Dakota, U.S.A
Research Project Title: Establishment of the presence bacterial *Biofilms* and its effect on the reduced performance of whey reverse osmosis (RO) membranes
- * Executive Research Associate (Nov 2007 – Oct 2008)
CADILA PHARMACEUTICALS PVT. LTD., Biotech R&D, Kadi, Ahmedabad, Gujarat, India
Project Title: Development of therapeutic allogenic vaccine against cancer using unique adjuvant
- * Guest Lecturer (June 2013- Dec 2017)
INSTITUTE OF SCIENCE & TECHNOLOGY FOR ADVANCED STUDIES & RESEARCH, Vidya nagar, Gujarat, India

RESEARCH PROJECTS UNDERTAKEN

- * As Principal Investigator; Extramural funding immobilized: 18.3 Lakhs (June 2014 – June 2018)
INVESTIGATION OF EFFICACY OF DEOXY RIBONUCLEASE (DNASE) AND OTHER ANTIMICROBIAL AGENTS AGAINST BIOFILMS OF PATHOGENS (DEPARTMENT OF BIOTECHNOLOGY, NEW DELHI, INDIA)
- * As Principal Investigator; Extramural funding immobilized: 6.5 Lakhs (July 2014 – July 2015)
DEVELOPMENT OF SYMBIOTIC EXTRUDED PRODUCT (GUJARAT STATE BIOTECHNOLOGY MISSION, GANDHINAGAR, GUJARAT, INDIA)

OTHER RESEARCH INTERESTS

- * Development of antibiofilm strategies| Encapsulation of DNase and antibiotic to control biofilms| Pro and prebiotics, functional foods| Pathogenesis

SUBJECTS TAUGHT

- * Food microbiology| Design and formulation of foods| Food fermentation| Food Nutrition and Biochemistry| Enzymology| Molecular and medical Microbiology| Immunology

SCHOLARLY ACTIVITY

♦ Career development courses:

- ♦ **Orientation course:** held during (6th May 2013- 1st June 2013), Sponsored by UGC, organized by Academic Staff College, Sardar Patel University, Vidyanagar
- ♦ **Refresher course:** held during (2nd June 2014-22nd June 2014), Sponsored by UGC, organized by Academic Staff College, Sardar Patel University, Vidyanagar

♦ Publications

- Komal Sharma and **Ankita Pagedar Singh**. Antibiofilm Effect of DNase against Single and Mixed Species Biofilm. **Foods** 2018 (March), 7, 42; doi:10.3390/foods7030042
 - Komal Sharma, Jitender Singh and **Ankita Pagedar Singh**. Combatting Biofilm Mediated Antimicrobial Resistance using Efflux Pump Inhibitor and Deoxyribonuclease. **International Journal of Advances in Science Engineering and Technology**, ISSN: 2321-9009 Volume-5, Issue-3, Jul.-2017
 - **Pagedar, A.**, Singh, J., 2015. Evaluation of antibiofilm effect of benzalkonium chloride, iodophore and sodium hypochlorite against biofilm of *Pseudomonas aeruginosa* of dairy origin. *J Food Sci Technology*. (2015). 52(8): 5317–5322. doi: [10.1007/s13197-014-1575-4](https://doi.org/10.1007/s13197-014-1575-4) (sep 2014)
 - **Pagedar, A.**, Singh, J., and Batish, V.K. 2012. Adaptation to benzalkonium chloride and ciprofloxacin affects biofilm formation potential, efflux pump and hemolysin activity of *Escherichia coli* of dairy origin. **Journal of Dairy Research**,79(04);383-389.
 - **Pagedar, A.** and Singh, J. 2012. Influence of different cell stages on biofilm formation by *Bacillus cereus* of dairy origin. **International Dairy Journal**, 23; 30-35.
 - **Pagedar, A.**, Singh, J., and Batish, V.K. 2011. Efflux mediated adaptive and cross resistance against ciprofloxacin and benzalkonium chloride in *Pseudomonas aeruginosa* isolates of dairy origin. **Journal of Basic Microbiology**, 51(3);389-395.
 - **Pagedar, A.**, Singh, J., and Batish, V.K. 2010. Surface hydrophobicity, nutritional contents affects *Staphylococcus aureus* biofilm and temperature influences its survival in preformed biofilm. **Journal of Basic Microbiology**, 50 (S1); S98-106.
- Book chapter :**
- **Pagedar, A.** and Singh, J. 2013. Antibiofilm Strategies. In *Biofilm and Bioengineering*. Simoes, M.V. and Filipe, M. (Ed). Nova Science Publishers, Inc. Hauppauge, NY, USA. ISBN: 978-1-62948-161-6

♦ Fellowships

- Recipient of Senior Research Fellowship at NDRI, Karnal (August 2004-October 2007)
- BioCARE award by Department of Biotechnology, India (2015-2018)

♦ Memberships of professional bodies

- Life member of Association of Microbiologists of India| Life member of Probiotic Association of India| Life member of Biotech Research Society of India| Indian society of technical education

Presentations at conferences (Presenter as underlined)

- ORAL PRESENTATION:
- Efficacy of DNase and efflux pump inhibitors against efflux positive and biofilm forming enterococci (Shivani Joshi, Sherin Thomas and Ankita Pagedar Singh.) National Seminar, Present day biology: impact of research at molecular and cellular level, 3-4 January, 2020, Department of Biochemistry- Biotechnology, St. Xavier's College (Autonomous) Ahmedabad. P.B. 4168, Navrangpura, Ahmedabad 380 009. Gujarat.
- Komal Sharma and **Ankita Pagedar Singh** Antibiofilm efficacy of biocides and DNase on mixed species biofilms formed by foodborne pathogens. National Seminar on New Developments in Dairy Sector: Issues and Strategies for increasing income of rural milk producer of India on 16th November 2019, organized by SMS college of Dairy Science, Anand Agricultural University, Anand
- Komal Sharma and **Ankita Pagedar Singh** , DNase I: A cue for Improving Antibiofilm Strategies for biofilm mediated infections and medical device associated biofilms. International Conference on Advances in

Biosciences and Biotechnology 2019, Organized by Jaypee Institute of Information Technology, Noida, UP, India on Jan 31st-Feb 02nd, 2019

- Komal Sharma and **Ankita Pagedar Singh**. Biofilm Destabilization and Debulking effect of DNase I: A cue for Improvising Antibiofilm Strategies in Food Industries .Third National Conference on “Contemporary Food Processing and Preservation Technologies” (12-13 April, 2018), Organized By: School of Bioengineering and Food Technology, Faculty of Applied Sciences and Biotechnology, Shoolini University, Solan (HP) India – 173229 (*Awarded 3rd best paper presentation*)
- Komal Sharma and **Ankita Pagedar Singh**. Combatting Biofilm Mediated Antimicrobial Resistance using Efflux Pump Inhibitor and Deoxyribonuclease. Conference “International Conference on pharmaceutical, medical and environmental health sciences” organized by IRAJ on 28th May 2017, at Bengaluru (*Awarded 1st best paper presentation*)
- Protective Effect Of Prebiotics On Probiotics’ Gastric Transit And Its Application In Formulating Food Products (Prasen Shirodkar, Kunal Raval, Supriya Ingawale, **Ankita Pagedar Singh**), sixth international conference fermented foods, health status and social well-being (December 6-7, 2013), Anand Agricultural University, Anand (Gujarat) India
- Phenotypic & Genotypic Screening of Efflux Pump Activity as Mechanism of Antimicrobial Resistance in Enterococci of Clinical, Commensal & Food Origin (Nikita Gor, Jitender Singh, **Ankita Pagedar Singh**), National Symposium on Microbial Biotechnology: Advances and Future Trends 2014, Department of Microbiology & Deptt Biotechnology, genetics, bioinformatics, Natubhai V Patel College of Pure and Applied Sciences, Vidyanagar, Anand, Gujarat, on 26th Feb 2014
- Evaluation of prebiotic potential of foods which protect survival of probiotic strain of Enterococcus faecium during gastric transit (**Rupal J. Solanki, Ankita Pagedar Singh**) Seminar-cum-Tech Fest “ADROIT’14” on October 15-16, 2014, Deptt. Food Processing Technology & bioenergy, Anand Agricultural University, Anand
- Synergistic Effect of Vanillin in Combination with Antibiotics, Biocide and Efflux Pump Inhibitors in Reducing Biofilm Formation Potential of Enterococcus faecalis ATCC® 29212™ (**Ankita Pagedar Singh**) Advances in Environmental Science & Technology: A Way Forward to Clean and Green Environment, Institute of Science & Technology for Advanced Studies & Research (ISTAR) on 28th February, 2015
- POSTER PRESENTATIONS:
 - Tyraminogenic Enterococci in Samples of Food, Environmental or Faecal Origin (Poorv Patel, Kandarp Rajyaguru and Ankita Pagedar Singh.) National Seminar, Present day biology: impact of research at molecular and cellular level, 3-4 January, 2020, Department of Biochemistry- Biotechnology, St. Xavier’s College (Autonomous) Ahmedabad. P.B. 4168, Navrangpura, Ahmedabad 380 009. Gujarat.
 - Combating E.coli biofilms using antimicrobials, efflux pump inhibitors and DNase (Poorv Patel, Kandarp Rajyaguru and Ankita Pagedar Singh.) National Seminar on Human health: need of the hour” on 24th December 2019, jointly organized by Indian Science Congress Association and Faculty of Science, The Maharaja Sayajirao University of Baroda
 - Evaluation of antioxidant potential of prebiotic and development of functional / synbiotic foods (Devanshi Sharma and Ankita Pagedar Singh), Present – Day Biology: A Bastion for Social and Sustainable Development, 4th-5th January, 2019, Organized by St. Xavier’s College (Autonomous) Ahmedabad. P.B. 4168, Navrangpura, Ahmedabad 380 009. Gujarat.
 - Conjugated Linoleic Acid: Its Significance and Production by Lactic Acid Bacteria (Disha Ghag, Chaitrali Musale & **Ankita Pagedar Singh**), National Symposium on Microbial Biotechnology: Advances and Future Trends 2014, Department of Microbiology & Deptt Biotechnology, genetics, bioinformatics, Natubhai V Patel College of Pure and Applied Sciences, Vidyanagar, Anand, Gujarat, on 26th Feb 2014
 - Effect of Food Extracts on Gastric Transit and Gut Adherence Potential of Probiotic Bacteria (Prasen Shirodkar, Kunal Raval, Supriya Ingawale and **Ankita Pagedar Singh**), National Symposium on Microbial Biotechnology: Advances and Future Trends 2014, Department of Microbiology & Deptt Biotechnology, genetics, bioinformatics, Natubhai V Patel College of Pure and Applied Sciences, Vidyanagar, Anand, Gujarat, on 26th Feb 2014
 - Improvisation of Antibiotic Dosing: Insights From Multidrug Resistance Profile of Enterococci (**Dip Patel** and **Ankita Pagedar Singh**), National Seminar on Recent Advances in Applied Sciences (8th March 2013), Shri A.N. Patel Post Graduate Institute, Anand in association with GSBTM
 - Screening of Efflux Pump Activity Among Enterococcal Isolates of Food, Clinical and Commensal Origin (**Nikita Gor**, Mayank Shah and **Ankita Pagedar Singh**), National Seminar on Recent Advances in Applied Sciences (to be held on 8th March 2013), Shri A.N. Patel Post Graduate Institute, Anand in association with GSBTM

- Extracellular DNA: A Lucrative Target to Improve Anti- Enterococcal Biofilm Strategies (Chandni Vadgama and **Ankita Pagedar Singh**), National Symposium on Innovations in Pharmaceutical Sciences (16th February 2013), Swarnim Vision, Ahmedabad
- Synergistic Effect of Efflux Pump Inhibitors and Benzalkonium Chloride Against Enterococci (Nikita Gor and **Ankita Pagedar Singh**), National Symposium on Innovations in Pharmaceutical Sciences (16th February 2013), Swarnim Vision, Ahmedabad
- Effect of Vanillin and Gentamicin on Biofilm Formation Potential of Enterococci (Mayank Shah and **Ankita Pagedar Singh**), National Symposium on Innovations in Pharmaceutical Sciences (16th February 2013), Swarnim Vision, Ahmedabad
- Probiotic Bistro- A destination to your happy gut (Mayank Shah, Chandni Vadgama and **Ankita Pagedar Singh**), National symposium on Entrepreneurship in Microbial Technology and Computer Science (9th -10th February, 2013), jointly organized by Shree Ramkrishna Institute of Computer Education and Applied Sciences and Southern Gujarat Chamber of Commerce & Industry - Surat.
- Vanillin: Not as Flavour but as an Antibiofilm Compound (Meghna Trivedi and **Ankita Pagedar Singh**), National symposium on Entrepreneurship in Microbial Technology and Computer Science (9th -10th February, 2013), jointly organized by Shree Ramkrishna Institute of Computer Education and Applied Sciences and Southern Gujarat Chamber of Commerce & Industry - Surat.
- Effect of extracellular DNA on biofilm formation potential of enterococci (Sweta Shah, **Ankita Pagedar Singh**), Regional Science Congress on Science for shaping the future of India (15th-16th, 2012) organized by Maharaja Sayajirao University, Vadodara
- Protective effect of Prebiotics on Biofilm Formation Potential of Enterococci pre and post Gastric Simulation (Bindi Sudheer and **Ankita Pagedar Singh**) Regional Science Congress on Science for shaping the future of India (15th-16th, 2012) organized by Maharaja Sayajirao University, Vadodara
- Tyramine producing potential of enterococci (Neha Patel, Sandip Sanghavi, **Ankita Pagedar Singh**), Regional Science Congress on Science for shaping the future of India (15th-16th, 2012) organized by Maharaja Sayajirao University, Vadodara
- Effect of simulated gastric conditions on probiotic potential of enterococci (Drishti Jethwa, **Ankita Pagedar Singh**, Shilpa Gupte), National Symposium on Status, Challenges and Opportunities in Life Sciences (10th September 2011) organized by ARIBAS. (**3rd prize** in Oral presentation; Abstracts published in International Journal of Pharma & Bio Sciences.)
- Biofilm formation by coagulase positive Staphylococcus aureus on packaging materials used for indian traditional dairy foods (**Ankita Pagedar**, Sanjeev K. Anand, Virender K. Batish) International Conference on Traditional Dairy Foods (14th to 17th November, 2007), organized by Dairy Technology Society of India at National Dairy Research Institute, Karnal, Haryana
- Development of cross and adaptive resistance in Staphylococcus aureus isolated from food contact surface biofilms. (**Ankita Pagedar**, Sanjeev K. Anand, Virender K. Batish) 48th Annual Conference of Association of Microbiologists of India (18th to 21st December, 2007) organized by Association of Microbiologists of India at Indian Institute of Technology, Chennai

The facts mentioned above are true to the best of my knowledge _____ ANKITA PAGEDAR SINGH