

Preeti Rajesh, PhD.

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Department of Biotechnology,
Sri Guru Granth Sahib World University (SGGSWU),
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EDUCATION

- **PhD in Pharmacology.** College of Pharmacy, University of South Carolina, Columbia, South Carolina, USA; Thesis title: **Homology-directed repair of DNA lesions generated by the mismatch repair dependent processing of cytotoxic guanine adducts**
- **MSc in BioChemistry.** Department of Biochemistry, University of Delhi South Campus, New Delhi; India
- **BSc (Honors) in BioChemistry.** Daulat Ram College, University of Delhi, New Delhi; India.

WORK EXPERIENCE

- **January 2016- to date;** Research Scientist; Department of Biotechnology; SGGSWU; Fatehgarh Sahib; Punjab; India – 140406.
- **September 2014- to January 2016;** Assistant Professor; Department of Biotechnology; SGGSWU; Fatehgarh Sahib; Punjab; India – 140406
- **February 2011 – October 2013; Scientist (NGS & Bioinformatics);** SciGenom labs pvt. Ltd; Plot 43A, SDF, CSEZ, Kakkanad, Kochi, Kerala, India - 682037
- **July 2006 – January 2011; Graduate Student;** Department of Pharmaceutical and Biomedical Sciences, South Carolina College of Pharmacy, University of South Carolina, 715 Sumter street, Columbia, SC-29208. Mentors: Dr. Michael D Wyatt and Dr. Douglas L Pittman.
- **January 2005 – June 2006; Graduate Student in Biomedical Sciences, Molecular Basis of Disease (MBD) program;** Health Science Campus University of Toledo, 3055 Arlington Avenue, Toledo, Ohio-43614. Mentor: Dr. Robert M Blumenthal
- **January 2004 – January 2005; Research Assistant;** Reproductive Immunology and Molecular biology lab, Department of Obstetrics and Gynecology, Medical College of Ohio, Toledo, OH

- **June 2003 - December 2003:** Junior Research Fellow (CSIR) at Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi, India.

RESEARCH GRANTS AWARDED

- **SERB-DST Young Scientist Research Grant** awarded from Jan. 2016 for a period of three years for project entitled “**Understanding the Potential Cross-talk between the homologous recombination and mismatch repair pathways of DNA repair**”

PUBLICATIONS

1. Singh, M., Kaur, P., Kumari, S., Rajesh P., Pittman, D.L. and **Rajesh, C. (2016)**; *Investigating the Role of RNA-Processing-Related and Mismatch Repair Proteins in Homologous Recombination Repair*. Book chapter in book titled “Recent Advances in Emerging Technologies”; Publisher: Sri Guru Granth Sahib World University; Page. 121-133.
2. Gupta R, Gupta A, Gopal M, Thomas GV, Vinu M, Gajewski J, Schuster SC, Thomas G, **Rajesh P. (2014)** *Sequencing and analysis of three plant growth promoting rhizobacteria isolated from the rhizosphere of plantation crops coconut, cocoa and arecanut*. Plos One; Volume 9; Issue 8; e104259.
3. Gopalan TK, Gururaj P, Gupta R, Gopal DR, **Rajesh P**, Chidambaram B, Kalyanasundaram A, Angamuthu R. **(2014)** *Transcriptome Profiling Reveals Higher Vertebrate Orthologous of Intra-Cytoplasmic Pattern Recognition Receptors in Grey Bamboo Shark*. Plos One; Volume 9; Issue 6; e100018.
4. **Rajesh P**, Litvinchuk A, Pittman DL and Wyatt MD. **(2011)**; *RAD51D homologous recombination repair protein mediates the processing of 6-thioguanine lesions downstream of mismatch repair*. Molecular Cancer Research Feb;9(2):206-14. [FEATURED IN HIGHLIGHTS OF THE ISSUE]
5. **Rajesh P**, Rajesh C, Wyatt, MD and Pittman, DL. **(2010)**; *RAD51D protects against MLH1-dependent cytotoxic responses to O⁶-methylguanine*; DNA Repair, 9, 458-467.
6. Nadkarni A, **Rajesh P**, Ruch RJ, Pittman DL. **(2009)**; *Cisplatin resistance conferred by the RAD51D (E233G) genetic variant is dependent upon p53 status in human breast carcinoma cell lines*. Molecular Carcinogenesis Jul; 48(7):586-91.
7. Bechtel JM, **Rajesh P**, Ilikchyan I, Deng Y, Mishra PK, Wang Q, Wu X, Afonin KA, Grose WE, Wang Y, Khuder S, Fedorov A. **(2008)**; *Calculation of splicing potential from the Alternative Splicing Mutation Database*. BMC Res Notes. 2008;1:4.
8. Bechtel JM, **Rajesh P**, Ilikchyan I, Deng Y, Mishra PK, Wang Q, Wu X, Afonin KA, Grose WE, Wang Y, Khuder S, Fedorov A. **(2008)**; *The Alternative Splicing Mutation Database: a hub for investigations of alternative splicing using mutational evidence*. BMC Res Notes. 2008;1:3.

9. Mruk I, **Rajesh P**, Blumenthal RM. (2007); *Regulatory circuit based on autogenous activation-repression: roles of C-boxes and spacer sequences in control of the PvuII restriction-modification system*. Nucleic Acids Research;35(20):6935-52.
10. Naz RK, Rajesh P. (2005); *Novel testis/sperm-specific contraceptive targets identified using gene knockout studies*. Frontiers in Biosciences. Sep 1;10:2430-46. Review.
11. Naz RK, Rajesh P. (2005); *Role of tyrosine phosphorylation in sperm capacitation / acrosome reaction*. Reproductive Biology and Endocrinology Nov 9;2:75. Review.

AWARDS AND ACHIEVEMENTS

- **Awarded the Graduate Student of the Year award (2010)** by the South Carolina College of Pharmacy, University of South Carolina, USA.
- **Awarded the Travel Grant (2009)** by the Graduate School, University of South Carolina, USA.
- **Awarded junior research fellowship (June 2003 – Dec 2003)** by the Council of Scientific and Industrial Research (CSIR), Government of India.
- **December 2002 – Qualified National Eligibility test (CSIR-UGC-NET) for award of research fellowship** conducted by Council Scientific and Industrial Research-University Grants Commission, Government of India.

PRESENTATIONS AND POSTERS

- Saini, R., Kahlon, JS., Rajesh, C. and **Rajesh, P. (2016); Phosphorylation of RAD51D in Response to Alkylation Base Damage**. at International Conference on “Recent Advances in Emerging Technologies” organized by and at **Sri Guru Granth Sahib World University (SGGSWU), Fatehgarh Sahib, Punjab, India on 23rd and 24th February 2016**.
- Kumari, S., **Rajesh, P.** and Rajesh, C. (2016); *In frame primer design for cloning and expression of human MSH2 & MSH6 genes*. at International Conference on “Recent Advances in Emerging Technologies” organized by and at **Sri Guru Granth Sahib World University (SGGSWU), Fatehgarh Sahib, Punjab, India on 23rd and 24th February 2016**.
- Invited presentation at 2nd Next-Generation Sequencing and Bioinformatics for Genomics & Healthcare meeting organized by SciGenom Labs with IIT Madras, **on Nov. 1st to 3rd, 2012 at IIT-Madras, Chennai, India**.
- Invited presentation at 26th Indian Cooperative Oncology Network (ICON), **on March 23rd to 25th March, 2012 at Crowne Plaza, Bangalore, India**.
- Invited presentation at First Next-Generation Sequencing and Bioinformatics for Genomics & Healthcare meeting, Organized by SciGenom Labs Private Ltd, Rajiv Gandhi

Centre for Biotechnology (RGCB) & Center for Bioinformatics, University of Kerala, INDIA, on Dec 16th and 17th, 2011 at RGCB, Thiruvananthapuram, Kerala, India.

- **Rajesh, P.**, Litvinchuk, A., Rajesh, C., Pittman, DL and Wyatt, M. *“Protective role of RAD51D in resolving intermediates generated by mismatch repair recognition of DNA damage”* Poster presented at **2009 AACR Conference on Frontiers in Basic Cancer Research, October 8-11, 2009 at Boston, MA.**
- **Rajesh, P.**, Litvinchuk, A., Rajesh, C., Wyatt, M. and Pittman, DL. *“MMR and HR Interplay in Response to Alkylation Base Damage”* Poster presented at **2009 FASEB Summer Research Conference, Genetic recombination and Genome rearrangements, August 2-7, 2009 at Snowmass village, CO.**
- **Rajesh, P.**, Rajesh, C., Wyatt, MD. and Pittman, DL. *“Maintaining Chromosome Stability by Cross-talk Between DNA Repair Pathways”* Poster presented at **2nd GSA Genetic Analysis: Model Organisms to Human Biology Meeting, January 5-8, 2008 at San Diego, CA.**

TECHNICAL AND INDUSTRIAL EXPERIENCE

- **2012-2013 – Trained in running and operation of Illumina’s Next Generation Sequencing platforms, MiSeq and HiSeq.**
- **2011 – Trained in library prep, running and operation of Roche’s Next Generation Sequencing platform, Roshe454 at Prof. Schuster’s lab at Pen State University, Hershey, PA, USA.**
- **Managing the NGS laboratory operation and Bioinformatic data curation team at SciGenom Labs.**
 - Overseeing and managing the curation projects for the development of Biological databases.
 - Managing and running the operations of the Next Generation Sequencing lab including planning projects, library preparation, running MiSeq and HiSeq.
 - Managing NGS research projects and collaborations at SciGenom.
 - Writing research grants and research papers including multiple manuscripts being written up at SciGenom.