

## **RITU GILL**

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## **Areas of Research Interest**

Malaria, Molecular Biology, & Immunology

## **Education**

- 2008** Ph.D. in Biotechnology, Defence Research and Development Establishment, Gwalior, India (Jan 2005- July 2008)
- 2003** M.Sc. Biotechnology from Kurukshetra University, Kurukshetra, India (2001-03)
- 2001** B.Sc. in Life sciences from Kurukshetra University, Kurukshetra, India (1998-2001).
- 2004** PG diploma in Copyright, Patent and Cyber laws from Kurukshetra University, Kurukshetra, India (2003-04)

## **Awards and Scholarship**

- 2008 – 2010** Postdoctoral Fellow at SCBG, International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi.
- 2008** The Indian Society for Parasitology- Young Scientist Award.
- 2008** International Development Grant for Young Women from International Society for Infectious Diseases, USA for 13th International Congress on Infectious Disease, Kuala Lumpur.
- 2005** Defence Research and Development Organization – Junior and Senior Research Fellowship.
- 2003 & 2004** Council of Scientific and Industrial Research (CSIR) and University Grand Commission (UGC) – National Eligibility Test.
- 2004** Graduate Aptitude Test in Engineering (GATE).
- 2004** Indian Council of Medical Research (ICMR) – Junior Research Fellowship.
- 2004** Agriculture Scientist Recruitment Board (ASRB) – National Eligibility Test.
- 2003** Stood 2<sup>nd</sup> in University level science quiz competition organized by Kurukshetra University, Kurukshetra.

## **Workshops, Trainings and Demonstrations**

- ❖ Attended seminar cum training programme on Electron Microscopy, jointly organized by Kurukshetra University, Kurukshetra and Punjab University, Chandigarh. (Jan 29-31, 2004)
- ❖ Attended course on “Recent Trends in Biological Mass Spectrometry” organized by Defence R & D Establishment, Gwalior.
- ❖ Participated in course on “Molecular Approaches in malaria research and vaccine development” Nov. 20 to Dec.1, 2006 at International Centre for Genetic Engineering and Biotechnology, New Delhi.
- ❖ Training on “hybridoma work” at All India Institute of Medical Sciences, New Delhi. Jan. 15 - Apr 15, 2007
- ❖ Acted as resource person in the 4<sup>th</sup> DBT Hands-on training cum workshop at Centre for Genomics, Jiwaji University, Gwalior. Jul 23-Aug 11, 2007.
- ❖ Participated in workshop on Proteomics: Use of Mass Spectrometry in Biology at ICGEB, New Delhi, Mar 23-27, 2009.
- ❖ Attended course on Real time PCR, Labindia, Gurgaon, Jun 30-Jul 2, 2010.
- ❖ Acted as joint organizing secretary of National workshop on Bioinformatics, MD University, Rohtak, Sept 14-16, 2010.

## **Conferences**

- ❖ Attended 91<sup>st</sup> Indian Science Congress organized by Punjab University, Chandigarh. (Jan 3-7, 2004)
- ❖ Participated in International Conference on Malaria, conducted by Malaria Research Centre, New Delhi. (Nov. 4-6, 2005)
- ❖ Participated in 33<sup>rd</sup> Annual Conference of Indian Immunology Society organized by All India Institute of Medical Sciences (AIIMS), New Delhi. (Jan 28-31, 2007)
- ❖ Participated in IX International Symposium on Vectors & Vector Borne Diseases, conducted by National Academy of Vector Borne Diseases, Puri, Orissa, India. (Feb. 15-17, 2008)
- ❖ Participated in 20<sup>th</sup> National Congress of Parasitology, Shillong. (Nov 3-5, 2008)
- ❖ Participated and acted as joint organizing secretary in National Conference on Medical Biotechnology, Rohtak (April 16-18, 2010)
- ❖ Participated in Colloquium on “Microbial technology and its human benefits” MD University, Rohtak, Aug 7, 2010.
- ❖ Attended India-Japan Seminar on Nanomaterials for diagnostics and therapeutics, MD University Rohtak Oct 30, 2010.
- ❖ Participated in workshop on “Benchtop NMR Spectrometer” organized by Cole-Parmer, Sept 2011, Delhi.

## **Teaching Activity**

- ❖ Teaching M.Sc. Agriculture Biotechnology and M.Sc. Biotechnology

## Publications

- Berwal R.**, Gopalan N., Chandel K., Prasad G.B.K.S, ShriPrakash. “Enhanced soluble expression, purification and biochemical characterization of lactate dehydrogenase from *Plasmodium falciparum*”. *Experimental Parasitology*. 2008, 120: 135-141.
- Berwal R.**, Gopalan N., Chandel K., Shri Prakash, Sekhar K. “Amplification of LDH gene from *Plasmodium vivax* Indian Strain”. *Journal of Vector Borne Diseases*. 2006, 43: 109-114.
- Bhatt TK, Yogavel M, Wydau S, **Berwal R.**, Sharma A. Ligand-bound structures provide atomic snapshots for the catalytic mechanism of D-amino-acid deacylase. *Journal of Biological Chemistry*. 2010, 285(8) 5917-30.
- Berwal R.**, Gupta V., Gopalan N., Prasad H. K., Shri Prakash. Three Different Strategies to Generate *Plasmodium vivax* Specific Monoclonal Antibodies and Development of Diagnostic System. *International Journal of Infectious Diseases*. 2008, 12(1): e309
- Saini V., **Berwal R.**, Sharma J., Singh A. Biofertilizers: Current Status and Perspectives in Agriculture. *Pollution Research*. 2004, 23 (4): 665-676.

## Book Chapters

- SS Gill, LP Singh, **Ritu Gill**, N Tuteja (2012) Generation and Scavenging of Reactive Oxygen Species in Plants under Stress. In: *Improving Crop Resistance to Abiotic Stress*, Tuteja et al., (Eds.), Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany, pp 49-62.
- LP Singh, SS Gill, **Ritu Gill**, N Tuteja (2012) Mechanism of Sulfur dioxide Toxicity and Tolerance in Crop Plants. In: *Improving Crop Resistance to Abiotic Stress*, Tuteja et al., (Eds.), Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany, pp 133-158.
- Sarvajeet Singh Gill, **Ritu Gill**, Gautam Kumar, Ashwani Pareek, Prabodh C. Sharma, and Narendra Tuteja (2012) Mustard: Approaches for Crop Improvement and Abiotic Stress Tolerance. In: *Improving Crop Resistance to Abiotic Stress*, Tuteja et al., (Eds.), Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany, pp 1349-1362.
- Berwal R.**, Saini V and Sharma J (2005) Ribozymes: RNA Acting as a catalyst. In *Advances in Biotechnology*. Edited by P.C. Trivedi. Agro Bios; 2005, p: 395-414.
- Saini V, **Berwal R.**, Sharma J and Singh A (2005) Transgenic Plants: The Genetically Modified Food for Thought. In *Advances in Biotechnology*. Edited by P.C. Trivedi. AgroBios; 2005, p: 81-97.

## Papers Presented

- Berwal R.**, Sharma A. “Functional and Structural Characterization of Chromatin Remodeling Proteins in *P. falciparum*.” National Conference on Medical Biotechnology, Rohtak. (April16-18, 2010).

- Berwal R.,** Sharma A. “Molecular tools in Parasitology” 20<sup>th</sup> National Congress of Parasitology, Shillong. (Nov. 3-5, 2008).
- Berwal R.,** Gopalan N. “Generation of *Plasmodium vivax* specific monoclonal antibodies and development of diagnostic system” 20<sup>th</sup> National Congress of Parasitology, Shillong. (Nov. 3-5, 2008).
- Berwal R.,** Gupta V., Gopalan N., Prasad H. K., Shri Prakash. “Three different strategies to generate *Plasmodium vivax* specific monoclonal antibodies and development of diagnostic system.” 13th International Congress on Infectious Disease, Kuala Lumpur, Malaysia. (June 19-22, 2008).
- Berwal R.,** Gopalan N., Chandel K., Prasad G.B.K.S, Shri Prakash. “High level soluble expression of PvLDH, its biochemical characterization and generation of antibodies.” IX International Symposium on Vectors & Vector Borne Diseases, Puri, India. (Feb. 15-17, 2008)
- Berwal R.,** Gopalan N., ShriPrakash, Sekhar K. “Antibodies generated against C-terminal domain of PvLDH are specific to *Plasmodium* species.” 33<sup>rd</sup> Indian Immunology Society Conference, AIIMS, New Delhi. (Jan 26-31, 2007)
- Berwal R.,** Gopalan N., Chandel K., Shri Prakash, Sekhar K. “Amplification of LDH gene from *Plasmodium vivax* Indian Strain.” International Conference on Malaria, New Delhi. (Nov. 4- 6, 2005).

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