CURRICULUM VITAE

RITU GILL
[Ph.D (DRDE, Gwalior; Post Doc (ICGEB)]

MOLECULAR PARASITOLOGY LAB
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Areas of Research Interest
Malaria Molecular Biology, Plant Biotic Stress Tolerance, Plant Microbe Interactions

Research Experience

- Functional and Structural Characterization of t-RNA synthetases and Chromatin Remodeling Proteins in *Plasmodium falciparum*.
- Generation and characterization of *Plasmodium vivax* specific monoclonal antibodies employing recombinant protein antigen and evaluation of their potential for diagnosis of malarial infections

Education

2008	Ph.D. in Biotechnology, Defence Research and Development Establishment (DRDE), 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

2014-2017	SERB-Young Scientist Award, Department of Science & Technology, Govt. of India, New Delhi
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 2nd in University level science quiz competition organized by Kurukshetra University, Kurukshetra.

Teaching/Research Activity

Teaching M.Sc. Agriculture Biotechnology and M.Sc. Biotechnology. Also guiding 02 Ph.D students.

DETAILS OF EMPLOYMENT

Name & Place of Organization	**Designation**	**Period**		**Nature of Job**
		From	**To**	
Centre for Biotechnology, Maharshi Dayanand University, Rohtak	Assistant Professor	**March 2010**	**Till date**	Teaching and Research
International Centre for Genetic Engineering and Biotechnology, N. Delhi	Postdoctoral Fellow	2008	2010	Research
Deptt of Biotechnology, Kurukshetra university, Kurukshetra and Deptt of Biotechnology, Ch. Devilal University, Sirsa	Lecturer	2003	2004	Teaching

DETAILS OF THE RESEARCH FUNDING RECEIVED IN PAST AND ONGOING PROJECT

S. No.	Project title and Ref No	Duration and cost	Funding agency	Achievements
1.	Cloning, expression and characterization of chromatin assembly factor 1 from human malarial parasite *Plasmodium falciparum* **-41-509/2012(SR)**	Completed (2012-2015) 9,36,000/-	UGC, New Delhi	Gene is cloned, expressed and recombinant protein is purified Work is presented in "International Conference on Plant Biotechnology, Molecular Medicine & Human Health" Delhi University (18th-20th Oct. 2013)
2.	Cloning, expression and purification of bromodomain containing protein from human malarial parasite *Plasmodium falciparum* – **DRDE-P1-2010/Proj/Task-152**	Completed (2010-2012) 6,29,975/-	DRDO (DRDE, Gwalior)	Work is presented in National symposium on Fight against Malaria: Prospects and Perspectives-9th March 2013 MDU Rohtak "Bioinformatics based analysis, cloning, expression and purification of bromodomain containing protein" Further characterization work is presented in "International Conference on Plant Biotechnology, Molecular

				Medicine & Human Health" Delhi University (18th-20th Oct. 2013) *Plasmodium falciparum*: Genomic glimpse of Bromodomain (BRD) Family, production and characterization of apicomplexan specific *Pf*BRD
3.	Molecular cloning and characterization of type III HSP40- a Zuotin related factor 1 from human malarial parasite *Plasmodium falciparum* **SB/YS/LS-302/2013**	On Going (2014-2017) 25,00,000/-	DST-SERB, New Delhi	Work is presented at International Conference on "International Congress on Infectious Diseases" organized by International Society of Infectious Diseases, USA held at Hyderabad
4.	DBT-MDU-Interdisplinary Life Science Programme for Advanced Research and Education, Section: Malaria Biology	On Going (2013-2017) 2.7 Crore	DST-IPLS, New Delhi	Work contribution towards Malaria Biology

Workshops, Trainings and Demonstrations

Professional training	**University/ Institution**	**Dates**
Post-Graduate Diploma in Patent, Copyright, and Cyberlaws	Kurukshetra University, Kurukshetra	May, 2003- May, 2004
Diploma in Computer Application	Track Computer Centre, Gwalior	April-Sept, 2005
Seminar cum training programme on Electron Microscopy	Kurukshetra University, Kurukshetra & Punjab University, Chandigarh	Jan 29-31, 2004
Course on Recent Trends in Biological Mass Spectrometry	Defence Research & Development Establishment, Gwalior	Mar 14-18, 2005
Course on Molecular Approaches in malaria research and vaccine development.	International Centre for Genetic Engineering and Biotechnology, New Delhi	Nov 20-Dec 1, 2006
Acted as resource person in 4th DBT Hands-on training cum workshop.	Centre for Genomics, Jiwaji University, Gwalior	Jul 23-Aug 11, 2007
Workshop on Proteomics: Use of Mass Spectrometry in Biology	International Centre for Genetic Engineering and Biotechnology, New Delhi	Mar 23-Mar 27, 2009
Training on Real time PCR	Lab India, Gurgoan	Jun 30-Jul 2, 2010
National workshop on Bioinformatics	MD University, Rohtak,	Sept 14-16, 2010
Benchtop NMR Spectrometer	Cole-Parmer, Delhi	Sept, 2011
Real time PCR	Invitrogen and MD University Rohtak	Jan 16, 2013

Agency/Organization which gave the award/fellowship	**Award/fellowship**
ICID, Cape Town, South Africa	Oral presentation at ICID, Cape Town, South Africa-2014
MEPHITIS, Barcelona, Spain	Attended and presented the research-2009

Organizing Secretary-NSFAM	National Symposium on Fight against Malaria-2013
ICGEB, New Delhi	Post doctoral fellowship-2008-2010
THE INDIAN SOCIETY FOR PARASITOLOGY	YOUNG SCIENTIST AWARD 2008 for best paper presentation
INTERNATIONAL SOCIETY FOR INFECTIOUS DISEASES, USA	INTERNATIONAL DEVELOPMENT GRANT FOR YOUNG WOMEN for attending 13th International Congress on Infectious Disease, Kuala Lumpur (2008).
CSIR-UGC	NET-2003, 2004
Defence Research and development Organization (DRDE, Gwalior)	JRF (2005-2007) SRF (2007-2008)
GRADUATE APTITUDE TEST IN ENGINEERING	GATE-2004
INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)	JRF-2004
AGRICULTURE SCIENTIST RECRUITMENT BOARD (ASRB)	ASRB-NET 2004
University level science quiz competition -Kurukshetra University, Kurukshetra 2003	2nd prize

Conferences

- Attended 91st 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 33rd 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 20th 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.

Selected Publications

BOOKS PUBLISHED

1. Ansari AA, Gill SS, **Gill R**, Lanza GR, Newman L (2014) ***Phytoremediation Management of Environmental Contaminants***, **Volume 1**. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN: 978-3-319-10968-8 http://www.springer.com/in/book/9783319109688

2. Ansari AA, Gill SS, **Gill R**, Lanza GR, Newman L (2014) ***Phytoremediation Management of Environmental Contaminants***, **Volume 2**. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN: 978-3-319-10394-5 (Print) 978-3-319-10395-2 (Online) http://link.springer.com/book/10.1007/978-3-319-10395-2
3. Ansari AA, Gill SS, **Gill R**, Lanza GR, Newman L (2016) ***Phytoremediation Management of Environmental Contaminants***, **Volume 3**. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA (In Press)
4. Anjum NA, Gill SS, **Gill R** (2013) ***Plant Adaptation to environmental Change: Significance of Amino Acids and their derivative*****.** CABI International, UK ISBN: 9781780642734 http://www.amazon.com/Plant-Adaptation-Environmental-Change-Significance/dp/1780642733

RESEARCH PUBLICATION (Selected)

1. Kundu P, Gill R, Ahlawat S, Anjum NA, Sharma KK, Ansari AA, Hasanuzzaman M, Ramakrishna A, Chauhan NS, Tuteja N, Gill SS (2018) Targeting redox regulatory mechanisms for Abiotic stress tolerqance in plants, In: Biochemical, Physiological and molecular avenues for combating abiotic stress tolerance in plants, Wani S (Ed.), Elsevier, Academic Press, USA, pp. 1-68
2. M. Kaushik, S.S. Gill, **R. Gill** (2016) *In-silico* analysis of Chromatin Assembly Factor 1 (CAF-1) family and production of PF3D7_0110700 protein in human malaria parasite *Plasmodium falciparum*. International Journal of Infectious Diseases 45:(1) 362–363. DOI: http://dx.doi.org/10.1016/j.ijid.2016.02.780 **(SCI Impact Factor: 1.8)**
3. P. Chahar, S.S. Gill, **R. Gill** (2016) Molecular cloning and production of type III Hsp40 protein co-chaperone PfZRF1 of human malaria parasite *Plasmodium falciparum*. International Journal of Infectious Diseases 45:(1) 355. **(SCI Impact Factor: 1.8)**
4. M. Kaushik, S.S. Gill, **R. Gill** (2016) Genome wide collation of zinc finger family in *P. falciparum*. International Journal of Infectious Diseases 45:(1) 360–361. **(SCI Impact Factor: 1.8)**
5. Chahar P, Kaushik M, **Gill SS**, Gakhar SK, Gopalan N, Datt M, Sharma A, Gill R (2015) Genome-wide collation of the *Plasmodium falciparum* WDR protein superfamily reveals malarial parasite-specific features. PloS One 10(6):e0128507. **(SCI Impact Factor: 3.6)**
6. Gill SS, Gill R, Trivedi DK, Anjum NA, Sharma KK, Ansari MW, Johri AK, Prasad R, Pereira E, Varma A, Tuteja N (2016) Piriformospora indica: potential and significance in plant stress tolerance. Front. Microbiol. doi: 10.3389/fmicb.2016.00332 **(SCI Impact Factor: 4.2)**
7. Gill SS, Anjum NA, Gill R, Yadav S, Hasanuzzaman M, Fujita M, Mishra P, Sabat SC, Tuteja N (2015) Superoxide dismutase - mentor of abiotic stress tolerance in crop plants. Environmental Science and Pollution Research 04/2015 **(SCI Impact Factor: 2.76)**
8. Anjum NA, Gill R, Kaushik M, Hasanuzzaman M, Pereira E, Ahmad I, Tuteja N, **Gill SS** (2015)ATP-sulfurylase, sulfur-compounds and plant stress tolerance. Frontiers in Plant Science 03/2015; 6(210). **(SCI Impact Factor: 3.64)**
9. Gill SS, Anjum NA, Gill R, Jha M, Tuteja N (2014) DNA damage and repair in plants under ultraviolet and ionizing radiations. The Scientific World Journal Article ID 250158
10. Anjum NA, **Gill SS,** Gill R, Hasanuzzaman M, Duarte AC, Pereira E, Ahmad I, Tuteja R, Tuteja N. (2014) Metal/metalloid stress tolerance in plants: role of ascorbate, its redox couple, and associated enzymes. Protoplasma. 2014 Mar 29. **(SCI Impact Factor: 3.171)**
11. **Gill SS,** R Gill, Tuteja R, Tuteja N (2014) Genetic engineering of crops: a ray of hope for enhanced food security. Plant Signaling & Behavior 9: e28545.
12. **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.
13. **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.
14. 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.

15. **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
16. Saini V., **Berwal R.,** Sharma J., Singh A. Biofertilizers: Current Status and Perspectives in Agriculture. *Pollution Research*. 2004, 23 (4): 665-676.

BOOK CHAPTERS (Selected)

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.

Personal Details

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