

DR. RUPINDER KAUR

Assistant Professor, Department of Biotechnology

Sri Guru Granth Sahib World University

Fatehgarh Sahib (Pb), India

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E-mail: rupinderkdogra@yahoo.in**Area of specialization:**

Molecular biology, Human Molecular Genetics and Genomics, Molecular diagnostics

Work Experience:

S.No.	Institute	Designation	Time Period	Nature of Job
1	Department of Biotechnology Sri Guru Granth Sahib World University Fatehgarh Sahib (Pb), India	Assistant Professor	1st July 2011 till date	Teaching (PG and UG Courses) and Research work
2	Department of Hematology, PGIMER, Chandigarh	CSIR-Senior Research Fellow (SRF)	July 2008 – June 2011	Research
3	Department of Hematology, PGIMER, Chandigarh	CSIR-Junior Research Fellow (JRF)	July 2006 – June 2008	Research

Managerial duties:

- Member of Board of Studies, Department of Biotechnology, SGGSWU
- Member of Academic council, SGGSWU
- Member of Research Doctoral committee, Department of Biotechnology, SGGSWU
- Member of Research Degree Board, SGGSWU
- Internal member, Institutional Ethical Committee, SGGSWU
- Internal member, Institutional Biosafety Committee, SGGSWU
- Incharge of the Department of Biotechnology from July 2011-Dec 2013

Academic Qualification:

S.No.	Degree	Year	Subject	Board/University/Institution	% of marks
1	10 th	1998	English, Hindi, Punjabi, Science, Social Science, Maths	CBSE	83.8
2	12 th	2000	PCB	CBSE	81.8
3	B.Sc. (HS) in Human Genetics	2003	Human Genetics	Guru Nanak Dev University (GNDU), Amritsar	70.2
4	M.Sc. (HS) in Human Genetics	2005	Human Genetics	GNDU, Amritsar	70.8
5	Ph.D.	2011	Study of genetic polymorphisms and risk factors in patients with Acute Myocardial Infarction	PGIMER, Chandigarh	

Professional Recognition/ Fellowship received:

S.No	Name of Award	Awarding Agency	Year
1.	GATE (Qualified)		2005
2.	LS-NET	UGC	June 2005
3.	ICMR fellowship (Qualified)	ICMR	July 2006
4.	PGIMER fellowship	PGIMER, Chandigarh	Jan 2006 – June 2006
5.	JRF-NET	CSIR	July 2006 – June 2009
6.	SRF-NET	CSIR	July 2009 – June 2011
7.	Participated in UGC-Sponsored Orientation Programme at Punjabi University, Patiala	UGC	02-05-2013 to 29-05-2013
8.	Participation in Refresher Course at Panjab University, Chandigarh	UGC	25-12-2015 to 01-06-2015
9	SERB-DST project entitled "Association of polymorphisms in base-excision and nucleotide-excision repair genes with DNA damage in pesticide-exposed agricultural workers of Punjab"	SERB-DST	Dec 2015

Awards / Medals:

- **Medalist in M.Sc. (H.S.) Human Genetics (2005) at GNDU, Amritsar**
- Topped M.Sc. (H.S.) I year in Human Genetics (2004) at GNDU, Amritsar
- 3rd in B.Sc. (H.S.) Human Genetics (2003) at GNDU, Amritsar
- 3rd in school in Matric examination
- Obtained fourth rank for Ph.D. entrance test conducted by PGIMER, Chandigarh at National level in Dec 2005 and awarded PGIMER fellowship
- Selected for Shyama Prasad Mukherjee (SPM) fellowship test in 2006
- An Invited Reviewer for **Clinical and Applied Thrombosis/Hemostasis (SAGE Publications)**

Research work:

- **Ph.D. thesis**

Title: Study of genetic polymorphisms and risk factors in patients with acute myocardial infarction

Institute: Department of Hematology, PGIMER, Chandigarh

Duration: Jan 2006 – July 2010

- **M.Sc. thesis**

Title: Study of DYS390 polymorphism and certain quantitative traits among Khatri population in Punjab, India

Institute: Department of Human Genetics, Guru Nanak Dev University (GNDU), Amritsar

Ph.D. research work Registered:

- Association of polymorphism in DNA repair genes with DNA damage in pesticides exposed agricultural workers of Punjab
- Association of polymorphism in oxidative stress genes with Cholinesterase activity in pesticides exposed agricultural workers of Punjab

Ongoing M.Tech. /M.Sc. thesis:

- Arg399Gln polymorphism in *XRCC1* gene in pesticides-exposed agricultural workers of Punjab
- Asp148Glu polymorphism in *APE1* gene in pesticides-exposed agricultural workers of Punjab
- Arg194Trp polymorphism in *XRCC1* gene in pesticides-exposed agricultural workers of Punjab
- Gln192Arg polymorphism in *PON1* gene in pesticides-exposed agricultural workers of Punjab
- Cys311Ser polymorphism in *PON2* gene in pesticides-exposed agricultural workers of Punjab
- Association of *Mas* gene polymorphism with Type 2 Diabetes Mellitus
- Association of *ACE2* gene polymorphism with Type 2 Diabetes Mellitus

M.Sc. Thesis Guided:

- Association of Angiotensin II Type 1 Receptor 1166 A/C Polymorphism with Type 2 Diabetes Mellitus
- Association of Angiotensin- I Converting Enzyme I/D Polymorphism and Type 2 Diabetes Mellitus
- Association of Angiotensinogen M235T Gene Polymorphism with Type 2 Diabetes Mellitus
- Determination of Potency of Ranikhet F and R2b Vaccines By Haemagglutination Inhibition Test
- Association of Renin -5312C/T Polymorphism with Type 2 Diabetes Mellitus
- To Study the Interaction of Renin -5312C/T and ACE I/D Polymorphism with Type 2 Diabetes Mellitus

Publications:

- **Rupinder Kaur**, Reena Das, Jasmina Ahluwalia, Rohit Manoj Kumar, KK Talwar. Genetic polymorphisms, biochemical factors and conventional risk factors in young and elderly North Indian patients with acute myocardial infarction. *Clin Appl Thromb Hemost* 2016; 22(2):178-83.
- **Rupinder Kaur Dogra**, Reena Das, Jasmina Ahluwalia, Rohit Manoj Kumar, KK Talwar. Association of Thrombomodulin Gene Polymorphisms and Plasma Thrombomodulin Levels With Acute Myocardial Infarction in North Indian Patients. *Clin Appl Thromb Hemost*. 2012; 19(6):637-643
- **Rupinder Kaur Dogra**, Reena Das, Jasmina Ahluwalia, Rohit Manoj Kumar, KK Talwar. Prothrombotic gene polymorphisms and plasma factors in north Indian survivors of acute myocardial infarction. *J Thromb Thrombolysis*. 2012;34(2):276-82.
- **Rupinder Kaur**, Reena Das, Jasmina Ahluwalia, Rohit Manoj Kumar, KK Talwar. Synergistic effect of angiotensin-II type-1 receptor 1166A/C with angiotensin-converting enzyme polymorphism on risk of acute myocardial infarction in north Indians. *J Renin Angiotensin Aldosterone Syst*. 2012;13(4):440-5.
- Badaruddoza, AJS Bhanwer, **Rupinder Kaur**, R Singh, K Matharoo and RNK Bamezai. Study of DYS 390 polymorphism among Khatri population of Punjab in comparison to other Indian and world population. *Int J Hum Genet* 2007; 7(3): 263-266.

Chapters in Book published:

- **“Polymorphisms in DNA repair genes and DNA damage caused by pesticides”** Recent advances in Emerging Technologies. Sri Guru Granth Sahib World University, Fatehgarh Sahib. 2016. ISBN No. 978-81-929890-1-3
- **“Role of DNA repair gene polymorphisms in various diseases”** Recent advances in Emerging Technologies. Sri Guru Granth Sahib World University, Fatehgarh Sahib. 2016. ISBN No. 978-81-929890-1-3

- **“Oxidative DNA damage caused by pesticides”** Recent advances in Emerging Technologies. Sri Guru Granth Sahib World University, Fatehgarh Sahib. 2016. ISBN No. 978-81-929890-1-3

Oral/Poster presentation:

- “Polymorphisms in DNA repair genes and DNA damage caused by pesticides” International Conference on Recent advances in emerging technologies” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (Feb 23-24, 2016)
- “Role of DNA repair gene polymorphisms in various diseases” International Conference on Recent advances in emerging technologies” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (Feb 23-24, 2016)
- “Association of Angiotensin- I converting enzyme I/D polymorphism with type 2 diabetes mellitus in North Indians” National Conference of Emerging Horizons in Science and Technology, SGGSWU, Fatehgarh Sahib – Jan 17-18, 2014
- “Association of Angiotensin- I converting enzyme I/D polymorphism with type 2 diabetes mellitus in North Indians” at National Conference of Emerging Horizons in Science and Technology SGGSWU, Fatehgarh Sahib – Jan 17-18, 2014.
- “Genetic polymorphisms and biochemical risk factors in patients with acute myocardial infarction” at ‘North West chapter of Indian Society of Hematology and Transfusion Medicine’ – Sept 25, 2010
- “Study of genetic polymorphisms and risk factors in patients with Acute Myocardial Infarction” Competed at ‘International symposium on Ethics, Culture & Population Genomics & 34th annual conference of Indian Society of Human Genetics (ISHG-2009)’ for Young Scientist award – March 2009.
- “Genetic polymorphisms as risk factors for acute myocardial infarction” at Joint meeting of International Society of Heart Research (Indian Section) & International Academy of Cardiovascular Sciences (Indian Chapter) and Heart Failure Society of India - Feb 29 to March 2, 2008
- “Genetic polymorphisms as risk factors for acute myocardial infarction” at ‘International Conference on Medical and Community Genetics’ Feb 15 to 17, 2008
- “Study of DYS390 polymorphism among Khatri population in Punjab in comparison with other Indian and world populations” at ‘International symposium on Human Genomics and Public Health and 31st annual conference of Indian Society of Human Genetics (ISHG-2006)’ – Feb 27 to March 1, 2006

Research Training:

- In Department of Hematology, All India Institute of Medical Sciences (AIIMS), New Delhi (Sept – Oct 2005)

Conferences/Workshops Organized:

- **“National** Conference on Preservation of Environment: Challenges before humanity” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (March 14, 2013)

Conferences/Workshops/Symposium Attended

- **“International** Conference on Recent advances in emerging technologies” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (Feb 23-24, 2016)
- **“National** Conference of Emerging Horizons in Science and Technology” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (Jan 17-18, 2014)

- “**National** Conference on Preservation of Environment: Challenges before humanity” organized at Sri Guru Granth Sahib World University, Fatehgarh Sahib (March 14, 2013)
- CME Immunology held at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (April 6, 2013)
- **National** Conference on “Applied Biosciences-Prospectives and Challenges (ABPC)-2012” (3th-4th February, 2012)
- “Hands-on training for Protein Purification and Characterization” (Sept 30 and Oct 1, 2011)
- North West Chapter of Indian Society of Hematology and Transfusion Medicine (Sept 25, 2010)
- Symposium on ‘Intellectual Property Rights in Biomedical Research’ held at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (Sept 18, 2010)
- Symposium on ‘Advanced Techniques in Basic Research: Tools of 21st century’ held at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (May 1, 2010)
- **International** symposium on Ethics, Culture and Population Genomics and 34th Annual Conference of Indian Society of Human Genetics (ISHG-2009) (March 2009)
- Joint meeting of **International** Society of Heart Research (Indian Section) & International Academy of Cardiovascular Sciences (Indian Chapter) and Heart Failure Society of India held at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (Feb 29 – March 2, 2008)
- **International** Conference on Medical and Community Genetics (Feb 15 – 17, 2008)
- **International** Symposium on Human Genomics and Public Health and 31st Annual Conference of Indian Society of Human Genetics (ISHG-2006) (Feb 27 – March 1, 2006)
- 7th Punjab Science Congress (Feb 7 – 9, 2004)
- 29th Annual conference of Indian Society of Human Genetics (ISHG-2004) (Jan 8 – 11, 2004)
- 28th Annual conference of Indian Society of Human Genetics (ISHG-2003) (Feb 7 – 9, 2003)

Technical Expertise

- **Molecular biology:** Isolation of Genomic DNA (blood, amniotic fluid, CVS, plant), RNA extraction, Restriction Digestion, DNA Amplification (PCR), Real time PCR, ARMS-PCR, Gap PCR, Hot Start PCR, Nested PCR, Multiplex PCR, Allele specific PCR, RT-PCR, cDNA synthesis, Purification of PCR products, Agarose Gel Electrophoresis, Native Polyacrylamide gel electrophoresis (PAGE), Restriction fragment length polymorphism (RFLP), Single stranded conformation polymorphism (SSCP), DNA Sequencing and Analysis, Hybridization Techniques (Southern, Dot/Slot-Blot).
- **Biochemistry/ Immunology:** Protein extraction and purification, SDS-PAGE, Silver Staining, ELISA (competitive, sandwich), Western Blotting, Flow cytometry
- **Genetics/Cell Biology:** Microscopy, Peripheral blood lymphocyte culture, Karyotyping, Single cell gel electrophoresis (COMET Assay), Micronuclei assay, Taking family history and pedigree making