

BIODATA

Name: Raman K Verma

Designation: Professor

Father's Name: Sh. Nand Kishore "Rajneesh"

Date of Birth: 1st October, 1958

Address: Office: Synthetic Organic and Medicinal Chemistry Laboratory
Department of Chemistry
Punjabi University Patiala - 147 002 (Pb) INDIA

Residence: B4 Punjabi University Campus
Patiala-147 002 (Pb) INDIA

Mobile: 99157 36061

Email: raman_verma58@yahoo.com

Academics:

Exam. Passed	Board/University	Year of Passing
PhD	Punjabi University Patiala	1987
MPhil	Punjabi University Patiala	1984
MSc (Org. Chem.)	Punjabi University Patiala	1981
BSc (Medical)	Punjabi University Patiala	1978

Teaching Experience:

Under Graduate Classes: 15 Years
Post Graduate Classes: 23 Years

Research Experience:

Topic of the PhD Thesis: *Esterification through O-alkylation: Synthetic and Mechanistic Studies*

Topic of MPhil Dissertation: *Synthon for Esterification*

Research Experience:

After MSc: 6 years
After PhD: 23 years:

MPharm: 8 years (1995-2002)
Doctorate and MPhil: 15 years*(2003-till date)

Area of Specialization:

Major: Synthetic Organic and Medicinal Chemistry
Minor: *in silico* Drug Design
Current: Design Synthesis and Computational Validation Studies of New Chemical Entities:

Antidiabetics: *Insulin Sensitizers*
Antihypertensives: *Centrally Acting*
Antiasthmatics: *Eosinophil Inhibition*

RESEARCH PROJECTS AND COLLABORATIONS:**HANDLED:**

1. A Convenient Synthesis of β -Thioamido- α,β -Unsaturated Esters and Thioesters: Mechanistic and Biological Activity Studies
1989-91(MINOR: UGC NEW DELHI).
2. Photochemistry of Pesticides and Soil Treatment Agents on Solid Surfaces-Soils and Silica Gel: A Comparative Study
1994-96 (MINOR: UGC NEW DELHI).
3. Substituted 4-Thiazolidinones and 2-Azetidinones: Synthetic and Biological Activity Studies
1998-2000 (MINOR: UGC UNASSIGNED GRANT, PUNJABIUNIVERSITY, PATIALA).

COLLABORATED:

1. Synthesis of Super Plant Growth Regulators, Biotechnology Division, Thapar Corporate R & D Center, Patiala
2. Application of Some Heteropoly Acid Salts as Catalysts in the Esterification Reactions, Department of Chemistry, Thapar Institute of Engineering and Technology, Patiala

ISLL-Punjabi University: Collaborative Research*

Design Synthesis and Computational Validation of Medicinally Significant New Chemical Entities (NCEs)

OTHERS

1. Recipient of Punjabi University award for **Improvement of Education** research work in colleges, **1987-88**.
2. Recipient of Punjabi University award for **Improvement of Education** research work in colleges, **1991-92**.

RESEARCH GUIDANCE:

MPharm Guided:	15
MPhil Guided	7
PhD Guided:	6: (5 Supervised and 1 Cosupervised)
PhD Registered:	3

* Punjabi University, Patiala and Ind-Swift Laboratories Ltd, Research and Development Centre, Mohali has signed general and confidentiality agreements to carry out collaborative research in two major areas of therapeutic significance on January 28, 2008. Ind-swift Laboratories Ltd, Research and Development Centre, Mohali (Rs. 36 Lac), Aug. 1, 2008 –July 31 2011 extended to July 31, 2013 and then to July 31, 2015.

LIST OF PATENTS AND PUBLICATIONS ARTICLES:**PATENTS PUBLISHED: 2**

- 1. Application No.: 201611030034**
Country: India
Published: 09 March, 2018
Complete Specification: 2 September, 2016
Inventors: Raman K. Verma, Rajiv Mall and Amanjot Singh
Title: *Novel indole derivatives as anti-diabetic agents and method thereof.*

- 2. Application No.: 201611030905,**
Country: India
Published: 30 March, 2018
Complete Specification: 4 September, 2017
Provisional Specification: 9 September, 2016
Inventors: Raman K. Verma, Rajiv Mall and Amanjot Singh
Title: *Novel benzimidazole derivatives as anti-diabetic agents and method thereof.*

RESEARCH PAPERS PUBLISHED: 27

1. Esterification at room temperature: A mixing affair only.
Baldev Kumar and **Raman K Verma**
Synthetic Communications. **1984**, *14*, 1359-1363.
2. Esterification of maleanilic Acids: Intramolecular esterification through imidate ester.
Baldev Kumar, **Raman K Verma** and Harjit Singh
Indian Journal of Chemistry. **1986**, *25B*, 692-696.
3. N-Aryl- α -chlorosuccinimide from maleanilic acids: Mechanistic and conformational studies.
Raman K Verma and Baldev Kumar
Indian Journal of Chemistry. **1991**, *30B*, 822-824.
4. ^1H NMR Spectra (52463M-52465M), IR Spectra (79495K-79497K).
Baldev Kumar and **Raman K Verma**
BioradSadtler Division. **1991**, Philadelphia PA: Sadtler Research Laboratories
5. A facile and high yield route to succinanilic esters.
Raman K Verma
Journal of Indian Chemical Society. **1992**, *69*, 683-684.
6. A simple and convenient synthesis of alkyl succinanilates
Raman K Verma
Asian Journal of Chemistry. **1993**, *5*, 1137-1139.
7. Synthesis of 2-substituted-[(2'-carboxybiphenyl-4-yl)methyl]benzimidzoles
Preet Mohinder Singh Bedi, **Raman K Verma** and Manjeet Singh
Indian Journal of Chemistry. **1998**, *37B*, 801-803.
8. Calcium conjugates of amino acids as plant growth regulators
R. K. Verma, R. K. Sharma, V. L. Maheshwari and R. M. Kothari
Journal of Plant Biology. **2000**, *27*, 85-88.
9. A facile synthesis of 2-Benzyloxy/2-(4-isopropylbenzyloxy)-2-methyl-3-(4-substituted phenyl) propanoic acid based insulin sensitizing agents: RSR₁₃₋₁₅ and PKR₁₃₋₁₅.
Raman K Verma, Rubina Singla and V. T. Punniyakoti
Medicinal Chemistry Research. **2004**, *13*, 660-676.
10. A facile and new approach to biologically significant and functionalisable heterobiaryls
Raman K Verma, Monika Aggarwal, Manisha Bansal and Inder Preet Kaur
Synthetic Communications. **2007**, *37*, 1-6.
11. A facile and new approach to synthesize 2-amino-4-(4-aminophenyl)-1*h*-1,3-diazol-1-yl-alkylaminomethanethiones
Raman K Verma, Monika Aggarwal, Manisha Bansal and Inder Preet Kaur
Medicinal Chemistry Research. **2007**, *15*, 483-491.
12. Lipase and Ca^{2+} Ions as biomarkers in blood serum of NIDDM
Verma N, Mittal M, **Verma R K**
Journal of Clinical and Diagnostic Research. **2008**, *2*, 942-945.

13. Docking of oxalyl aryl amino benzoic acids derivatives into PTP1B
Neelem Verma, Meenakshi Garg and **Raman Kumar Verma**
Bioinformation. **2008**, 3(2), 83-88.
14. QSAR studies on structurally similar oxalyl aryl amino benzoic acid derivatives as antidiabetic agents
Verma N, Mittal M, **Verma R K**
Calicut Medical Journal. **2008**, 6(4): e3 1-11
15. The Application of Comparative Molecular Field Analysis for the Design of α -Anilino Substituted-3-Phenyl Propanoic Acids as Novel PPAR α/γ dual Ligands
Raman K Verma, Prithwish Ghosh, Vijay Kumar and Lalit K Wadhwa
Medicinal Chemistry Research. **2012**, 21, 2873-2884.
16. Heterocyclyl Linked Anilines and Benzaldehydes as Precursors for Biologically Significant New Chemical Entities
Raman K Verma, Vijay Kumar, Prithwish Ghosh and Lalit K Wadhwa
Journal of Chemical Sciences. **2012**, 124, 1063-1069.
17. 3D-QSAR Study of Tyrosine and Propanoic Acid Derivatives as PPAR α/γ Dual agonists using CoMSIA
Raman K Verma, Vijay Kumar, Prithwish Ghosh and Lalit K Wadhwa
Medicinal Chemistry Research. **2013**, 22, 287-302.
18. Design and Synthesis of Benzimidazole-Linked *Meta*-Substituted Benzylidenes/Benzyls as Biologically Significant New Chemical Entities
Raman K. Verma, Rajiv Mall, Prithwish Ghosh, and Vijay Kumar
Synthetic Communications. **2013**, 43, 1882–1895.
19. Design, Synthesis and Computational validation of Novel Benzimidazole/Indole Based PPAR α and PPAR γ Partial Agonists
Raman K Verma, Prithwish Ghosh, Vijay Kumar and Lalit K Wadhwa
Journal of Chemical Sciences. **2013**, 125, 1555-1571.
20. Indolyl linked *meta*-substituted benzylidene-based novel PPAR ligands: Synthetic and docking studies
Raman K. Verma, Rajiv Mall and Amanjot Singh
Medicinal Chemistry Research. **2015**, 24, 1396-1407.
21. Methylchromonyl linked benzylidenes as novel partial PPAR γ agonists: Synthesis, characterization and docking studies
Amanjot Singh, Gagandeep Singh, Raman K. Verma and Rajiv Mall
International Journal of Advanced Research. **2016**, 4(6), 574-582.
22. Novel benzimidazole derivatives as partial ppar γ agonists: Synthesis, characterization and docking studies
Gagandeep Singh, Amanjot Singh, Varinder Singh, Raman K. Verma and Rajiv Mall
World Journal of Pharmacy and Pharmaceutical Sciences. **2016**, 5(7), 1080-1091.

23. Synthesis, characterization and docking studies of chromonyl linked *meta*-substituted benzylidenes of biologically significant PPAR γ Agonists
Gagandeep Singh, Amanjot Singh, Raman K. Verma and Rajiv Mall
International Journal of Current Research.**2016**, 8(6), 32506-32511.
24. Novel indole-2-carboxylic acid linked 3-phenyl-2-alkoxy propanoic acids: Synthesis, molecular docking and *in vivo* antidiabetic studies
Amanjot Singh, Raman K. Verma, Anurag Kuhad and Rajiv Mall
Medicinal Chemistry Research.**2017**, DOI 10.1007/s00044-017-1791-3.
25. Novel indolyl linked para-substituted benzylidene-based phenyl containing thiazolidinediones and their analogs as α -glucosidase inhibitors: synthesis, *in vitro*, and molecular docking studies
Jeewanjot Kaur, Amanjot Singh, Gagandeep Singh, Raman K. Verma and Rajiv Mall
Medicinal Chemistry Research.**2017**, DOI 10.1007/s00044-017-2112-6.
26. Novel benzoxazole derivatives featuring rhodanine and analogs as antihyperglycemic agents: synthesis, molecular docking, and biological studies
Varinder Singh, Amanjot Singh, Gagandeep Singh, Raman K. Verma and Rajiv Mall
Medicinal Chemistry Research.**2017**, DOI 10.1007/s00044-017-2097-1.
27. Synthesis, biological evaluation and molecular docking studies of novel benzimidazole derivatives
Gagandeep Singh, Amanjot Singh, Raman K. Verma, Rajiv Mall and Uzma Azeem
Computational Biology and Chemistry.**2018**, 72, 45–52.

ARTICLES: 2

1. Hereditary Predisposition to Malignancies
Raman K Verma, New Horizons in Human Biology
Editor I J S Bansal et al, 55-58 (1991)
Today and Tomorrow Printers and Publishers, New Delhi-110 005
2. NMR-A Boon for the Organic Chemist
Raman K Verma
IX Refresher Course in Chemistry
ACS and Dept. of Chemistry, Punjab University Chandigarh.
Abstracts of lectures p46 (March-April 1994).

CONFERENCES/WORKSHOPS ATTENDED:**A. INTERNATIONAL: 11**

1. Esterification reactions of Maleanilic Acids: Synthetic and Mechanistic Approach
10th IUPAC International Conference on Organic Synthesis (ICOS -10)
Indian Institute of Science, Bangalore (**December 11-16, 1994**)
2. A mixing affair package to useful derivatives of meleanilic acids at room temperature
20th IUPAC Symposium on the chemistry of natural products
Chicago IL USA (**September 15-20, 1996**)
3. Facile Synthesis of 2-Substituted Benzimidazole Analogues of EXP 7711 Angiotensin II Receptor Antagonists
7th Kyoto Conference of Organic Chemistry (IKCOC-7)
Osaka Japan (**November 10-14, 1997**)
4. A Newer and efficient synthesis of 3-Aryl-2-Aryloxypropanoic acid based insulin sensitizing agents
International Symposium on the Drug Discovery Paradigm
Cambridge Health Tech Institute, USA and Astra Research Centre, Bangalore
Indian Institute of Science, Bangalore, India (**September 15-17, 1999**)
5. **Attended**
International Symposium on Bioinformatics and Genomics
Confederations of Indian Industries, Karnataka Office
Indian Institute of Science, Bangalore, India (**January 15-17, 2001**)
6. N-Alkyl-N'-(3,5-dibromo-4-hydroxy)benzylguanidine based centrally acting antihypertensive agents
International Symposium on Progress in Drug Discovery and Development Sciences
Astra Zeneca Research Foundation, Bangalore, India
Indian Institute of Science, Bangalore, India (**January 17-19, 2001**)
7. Facile Synthesis of Suitably Substituted 2-Aminoimidazoles and 2-Aminoimidazolines as Expected Antiasthmatic Agents
10th Symposium on the Latest Trends in Organic Synthesis (LTOS -10)
Gainesville, Florida, USA. (**October 23-26, 2002**)
8. A Facile Synthesis of 2-[(Substituted benzyl)imino/amino]imidazolidine/imidazoline based centrally acting antihypertensive agents
IUPAC International conference on Biodiversity and natural Products: Chemistry and Medical applications (ICOB-4 and ISCNP-24)
Hotel Le Meridian, New Delhi, India (**January 26-31, 2004**)
9. A facile synthesis of 2-Benzyloxy/2-(4-isopropylbenzyloxy)-2-methyl-3-(4-substituted phenyl) propanoic acid based insulin sensitizing agents: RSR₁₃₋₁₅ and PKR₁₃₋₁₅.

2nd International Symposium
Current Trends In drug Discovery Research (CTDDR - 2004)
CDRI, Lucknow, India (**February 17-20, 2004**)

- 10.** Design and Synthesis of 4-(cyclicimido)-phenyl containing 2-amino-2-imidazoline and alkylguanidine based new and biologically significant ligands.
International conference On Chemistry Biology Interface: synergistic New Frontiers (CBISNF 2004)
VigyanBhaban, New Delhi, India (**November 21-26, 2004**)

Research Work in collaboration with Centre for Pharmacoinformatics (NIPER)

- 11a.** Ideal Synthesis and Comparative Alignment Studies of Phenylpyridine and Phenylpyridopyrimidine Based Compounds with Expected Antiasthmatic Activity
Raman K. Verma*, M Elizabeth Sobhia[†], Monika Aggarwal, Manisha Bansal and InderPreet Kaur
- 11b.** Synthesis and 3D QSAR Studies of 2-Aminoimidazolines and their Isosteres as Central α_2 -Adrenoceptor Agonists
Raman K. Verma*, M Elizabeth Sobhia[†], Manisha Bansal, Monika Aggarwal and InderPreet Kaur
- 11c.** 3D QSAR Studies on Newly Designed Phenylpropanoic Acid Based PPAR γ Agonists as Potent Insulin Sensitizers
Raman K. Verma*, M Elizabeth Sobhia[†], InderPreet Kaur, Manisha Bansal and Monika Aggarwal
- 11d.** Synthesis and Alignment Studies of 3,6-Diaryl-1,3-oxazinane-2-thiones as Potential Anticonvulsant Agents
Baldev Singh*, Ajaib Singh and Raman K Verma

3rd International Symposium
Current Trends In drug Discovery Research (CTDDR 2007)
CDRI, Lucknow, India (**February 17-21, 2007**)

B. NATIONAL: 34

1. Radiation and Chemical Mutagens
NCCYSRF, Punjabi University, Patiala (**January 17-19, 1989**)
2. NMR-A Diagnostic Aid: Present and Future Prospectives
UGC Seminar on Biotechnology, Punjabi University, Patiala (**March 14-15, 1989**)
3. Hereditary Predisposition to Malignancies
UGC Seminar on New Horizon in Human Biology, Punjabi University, Patiala
(**November 9-10, 1989**)
4. **Attended**
Short Term Course on Instrumental Analysis. Chemical Engineering Division,
TCRDC, Patiala (**November 26-30, 1990**)
5. NMR Study of Some N-(o-and m-substituted) Aryl-a-chlorosuccinimides.
National Seminar on Newer Methods of Synthesis in Chemistry.
Punjabi University, Patiala (**October 27-29, 1993**)
6. **Attended**
5th National Workshop on Mass Spectrometry
(5thNWMS)ISMAS-BARC Bombay Sponsored
RSIC, Punjab University, Chandigarh (**April 19-26, 1994**)
7. Derivation of Maleanilic Acids: Synthetic, Mechanistic and Stereochemical Approach
83rd Indian Science Congress
Punjabi University, Patiala (**January 1996**)
8. **Attended**
Summer School on Computer Aided Drug Design
National Institute of Pharmaceutical Education and Research, SAS Nagar,
Mohali, Punjab (**June 15-19, 1998**)
9. **Attended**
3rd National Symposium in Chemistry (NSC-3),
Chemical Research Society of India (CRSI), Bangalore Sponsored
Department of Chemistry and Centre for Advanced Studies in
Chemistry, Panjab University, Chandigarh (**February 2-4, 2001**)
10. **Attended**
Workshop on Pharmacoinformatics In Drug Design
National Institute of Pharmaceutical Education and Research, SAS Nagar,
Mohali, Punjab (**April 14-16, 2005**)
11. **Attended**
Workshop on Pharmacoinformatics: QSAR
National Institute of Pharmaceutical Education and Research, SAS Nagar,
Mohali, Punjab (**March 1-3, 2006**)

- 12. Attended**
Workshop on Pharmacoinformatics: Structure Based Drug Design
National Institute of Pharmaceutical Education and Research, SAS Nagar,
Mohali, Punjab (**March 13-15, 2008**)
- 13. Chairperson**
1st Annual conference on Recent Advances in Chemical and environmental sciences -
2009 (RACES-09) Multani Mal Modi College, Patiala.
January 15-16,2009
- 14. Invited Talk**
NDDR: Rational Drug Design and Combinatorial Chemistry
Raman K Verma
National Symposium on Recent Trends in Chemistry – 2009 (NSRTC 09)
Department of Chemistry, Punjabi University, Patiala
January 21-22, 2009
- 15. Chairperson**
National Symposium on Recent Trends in Chemistry – 2009 (NSRTC 09)
Department of Chemistry, Punjabi University, Patiala.
January 21-22, 2009
- 16. Convener Technical ProgrammeCommitte**
National Symposium on Recent Trends in Chemistry – 2009 (NSRTC 09)
Department of Chemistry, Punjabi University, Patiala.
January 21-22, 2009
- 17. Chairman**
National Conference on Innovations in Drug Discovery and Research (NC-IDDR)
Department of Pharmaceutical Sciences and Drug Research
Punjabi University, Patiala.
March 3-5, 2009
- 18. Oral Presentation**
Post Genomic Era and Informatics: How the Revolution is Transforming Chemistry
Raman K Verma
National Symposium on Emerging Trends in Chemistry – 2010 (NSETC 10)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2010
- 19. Chairperson**
National Symposium on Emerging Trends in Chemistry – 2010 (NSETC 10)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2010
- 20. Convener Technical ProgrammeCommitte**
National Seminar on Emerging Trends in Chemistry – 2010 (NSETC 10)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2010

- 21. Deputy Coordinator**
Release of Information Brochure
Intellectual Property Rights Cell (IPR - Cell)
Punjabi University Patiala And PSCST-Chandigarh
March 18, 2010.
- 22. Organizing Secretary**
National Seminar on Recent Advances in chemistry and their Impact on Environment-2011 (NSRACE-11)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2011.
- 23. Organizing Secretary**
International Year of Chemistry-2011 (IYC-11)
Department of Chemistry, Punjabi University, Patiala.
- 24. Organizing Secretary**
National Seminar on Chemistry an Interdisciplinary Science-2012 (NSCIS-12)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2012.
- 25. Organizing Secretary and Deputy Coordinator**
One Day Workshop on
Practical Aspects on the Importance of Patents in Research (PAIPR – 2013)
Intellectual Property Rights Cell (IPR - Cell)
Punjabi University Patiala and PSCST-Chandigarh
February 12, 2013
- 26. Coordinator**
National Seminar on New Frontiers In Chemistry - 2013 (NFIC-13)
Department of Chemistry, Punjabi University, Patiala.
February 15-16, 2013
- 27. Coordinator**
National Seminar on New Paradigm in Chemical Sciences (NPICS-2014)
Department of Chemistry, Punjabi University, Patiala.
February 13, 2014
- 28. Convener**
Synergistic Aspects of Chemical and Other Sciences -2015 (SACOS-2015)
Department of Chemistry, Punjabi University, Patiala.
February 19-20, 2015
- 29. Organizing Secretary and Deputy Coordinator**
One Day Workshop on
Prior Art Search and Filing of Patents (PSFP – 2015)
Intellectual Property Rights Cell (IPR - Cell)
Punjabi University Patiala And PSCST-Chandigarh
March 25, 2015

- 30. Convener**
National Seminar on New Paradigm in Chemical Sciences: Synthetic and Analytical Perspectives – 2016 (NPICS:SAP-2016)
Department of Chemistry, Punjabi University, Patiala
February 4-5, 2016.
- 31. Organizing Secretary and Deputy Coordinator**
One Day Seminar on
General and Legal Aspects of Filing and Maintaining IPR-2016” (GLA: FMIPR-2016)
Intellectual Property Rights Cell (IPR - Cell)
Punjabi University Patiala and PSCST-Chandigarh
March 29, 2016
- 32. Convener**
National Seminar on New Paradigm in Chemical Sciences: Synthetic and Analytical Perspectives – 2017 (NPICS:SAP-2017)
Department of Chemistry, Punjabi University, Patiala
February 9-10, 2017.
- 33. Coordinator**
National Conference on Chemical and Environmental Sciences: Innovations and Advances – 2018 (CES:IA-2018)
Department of Chemistry, Punjabi University, Patiala
February 15-16, 2018.
- 34. Organizing Secretary and Deputy Coordinator**
One Day Seminar-Cum-Panel Discussion
Punjabi University, Patiala: Drafting - IPR Policy - 2018
PUP: DIPRP-2018
March 27, 2018

UNIVERSITY ASSIGNMENTS:

Member: ACD
Member:BPSAR
Member:RAC
Member:Faculty of Physical Sciences
Member:Board of Post Graduate studies in Chemistry
Member:Board of Under Graduate studies in Chemistry

Director: Institute for University Industry Partnership
Coordinator: UGC:SAP(DRS-II): Till 30.06.2017
Deputy Coordinator:IPR-Cell: 2009 Onwards
Member:Internal Quality Assurance Cell (IQAC):2010 Onwards

ASSIGNMENTS OF OTHER UNIVERSITIES:

Member:Board of Post Graduate studies in Chemistry:KUK
Member:Board of Under Graduate studies in Chemistry:KUK
Member:Board of Post Graduate studies in Chemistry:PUC
Member:Board of Post Graduate studies in Chemistry:MMU

MEMBERSHIP OF SOCIETIES:

- 1. Indian Society for Mass Spectrometry**
Life Membership No. of ISMAS: L – 358
- 2. American Chemical Society**
Membership No. for year 2000: 2269533
- 3. Indian Society for Radiation and Photochemical Sciences**
Life Membership No. of ISRAPS: L – 141