

LIFE TIME ACHIEVEMENT AWARD-2019
by Indian Society of Chemists & Biologists, Lucknow

Professor Nisheeth Desai

Senior Professor & Head, Department of Chemistry,
DST-FIST, Sponsored Department,
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Professor Nisheeth Desai is presently working as Professor & Head, Department of Chemistry, MK Bhavnagar University, Bhavnagar since 2008. He has more than 35 years of teaching and research experience. His areas of research of Synthetic Organic Chemistry Including Heterocyclic Bioactive Molecules, Green Chemistry base on Microwave synthesis of Organic compounds, Intellectual Property Rights (IPR) and its Management in academic and Entrepreneurship in Academic Institutes. Prof. Desai's research work is well acclaimed both at national and international level as evidenced by an h-index of 24, i10-index of 64 and more than 2018 citations. He has successfully guided forty two research students and has completed three major research projects sponsored by national agencies; currently he has several projects of worth of Rs. 1 crore from different funding agencies like MES, UGC, BRNS and CSIR. He has published more than 130 research papers in Journals of repute. In 1995, he has been awarded prestigious **Career Award for Young Scientists** by University Grants Commission, New Delhi which carried 2 lack for further research on Synthesis and Characterization of some heterocyclic compounds for the chemotherapy of Cancer and AIDS". He got special grant of Rs. seven lakh under its scheme for one time grant to Professors of Science Departments of various universities under UGC-BSR in 2012. He has filled three Indian Patents on fluorinated heterocyclic compounds. He has successfully guided 42 PhD students, 3 PDFs and currently 8 students are working for their PhD degree.

Prof. Desai is associated with several professional scientific societies like Indian Chemical Society, Indian Science Congress, Chemical Research Society of India, Society for Material Chemistry, etc. He has successfully organized national level seminars and workshops. Prof. Desai is the coordinator of DST-FIST program of the Department and Chairman of Departmental Research Committee for new Ph.D registration. He was Dean, Faculty of

Science, Member of Executive Council, Academic Council, Chairman of Board of Studies and member of several power bodies of the University. He was Chairman of search committee for selection of Vice Chancellor of Saurashtra University in 2011 and worked as Chancellor Nominee on the selection committee for the selection of academic positions in the different Universities of Gujarat. Prof. Desai is a reviewer to recommend papers for publication in reputed Journals like IJC, BMC, EJMC, BMCL, JMC CBDD, etc , He has delivered several invited talk in the national and international seminars, workshops and conferences. He had chaired the many scientific sessions of national and internal conferences, seminars and workshops. He is great fund mobilizer and under his dynamic leadership Department has mobilize Rs. 4 crore from various funding agencies and from revenue of self-finance course and from these revenue he has developed world class infrastructures in the Department.

ISCB AWARD FOR EXCELLENCE- 2019 IN CHEMICAL SCIENCES by Indian Society of Chemists & Biologists, Lucknow

Dr. Vijayamohan K Pillai
Director, CSIR-CECRI,
Karaikudi – 630003, TamilNadu, India



Citation Details of Dr. Vijayamohan K Pillai

https://scholar.google.co.in/citations?hl=en&user=tYQGLa4AAAAJ&view_op=list_works&sort_by=pubdate

1. Total Citation - 11465
2. Average Citation - 44
3. h-Index - 54

During the last decade, Dr. Vijayamohan has made many significant contributions in the fields of **Electrochemistry** and **Materials Chemistry** – dealing with unique self-assembled monolayers for biosensor applications, innovative shape-dependent electrocatalysts as well as nanocomposite electrolytes for **fuel cells**, novel 2-D and surface-engineered electrodes for energy storage applications **as a part of his innovative, multidisciplinary research and teaching** both in National Chemical Laboratory, Pune and in Central Electrochemical Research Institute, Karaikudi. Some of the key achievements are:

1. Self-assembled Monolayers and Monolayer protected Nanostructures: Many types of self-assembled monolayers (SAM) and monolayer protected metallic nanoclusters (MPCs) have been developed for a range of applications including, biosensors, MEMS fabrication and controlling wettability of surfaces;

2. Polymer Electrolyte Membrane Fuel Cells: Production of affordable and clean energy is one of the biggest challenges facing mankind and polymer electrolyte fuel cells offer an enticing technology to fulfil the future energy needs. However, currently the technology is too expensive and Dr. Vijayamohan's group has developed many size and shape controlled electrocatalysts for both cathodic (oxygen reduction) as well as anodic (hydrogen, methanol and ethanol oxidation) reactions, in addition to many remarkable composite electrolytes with enhanced proton conductivity.

3. Hybrid Materials for Rechargeable Li-ion Batteries and Supercapacitors: One of the important contributions is in developing many composite materials (conducting polymers like PEDOT with 2-D systems) as cathodes for rechargeable Li-ion, in addition to many hybrid materials like functionalized carbon nanotubes for high-performance supercapacitors like “all-solid-state supercapacitors.

4. Redox Flow Batteries: For large level of energy storage, redox flow batteries are particularly useful and the group has developed functionalized Carbon nanotubes (CNTs) as efficient electrodes in rechargeable zinc bromine redox flow battery (ZBB) due to their high electrocatalytic activity, enhanced electrical conductivity and unusual mechanical strength. In addition to the above fundamental contributions, the nominee was also associated with many industrial R&D activities during the last two decades ranging from simply consultancy programs from BEL, Pune and Exide, Mumbai to improve their batteries to few sponsored projects to improve the energy efficiency. While working at NCL, the nominee was also instrumental in initiating the multi-institutional NMITLI Program (NPL, NCL and CECRI) on polymer electrolyte fuel cells which has culminated in setting up of a 3 kW integrated fuel cell system at the Reliance refinery site (Patalganga, Maharashtra) in a public-private partnership mode.

ISCB DISTINGUISHED WOMEN SCIENTISTS AWARD-2019

Dr. Neelima Gupta

Associate Professor, Department of Chemistry

Coordinator, UGC-Centre of Advanced Study in Chemistry

Joint Director, Centre for Converging Technologies

Course Coordinator, CADD, DIC-RU

University of Rajasthan, Jaipur

Email: guptaniilima@gmail.com



Dr. Neelima Gupta after obtaining Ph.D. in synthetic organic chemistry from University of Rajasthan, Jaipur worked as Lecturer in College Education Department, Government of Rajasthan for two years and subsequently held postdoctoral position sponsored by German Research Foundation at the EMA University of Greifswald, Germany, prior to joining the University of Rajasthan in 1996.

Her research interests include low coordinated phosphorus compounds, phosphorus heterocycles, computational chemistry assisted study of reaction mechanism and drug-biomolecule interactions. She started the research in computational chemistry under fast-track scheme to Young Scientists by DST. She was visiting scientist to the Phillips University of Marburg under Indo-German cooperation program. She has authored several chapters in reference series Science of Synthesis (Thieme Chemistry), Topics in Heterocyclic Chemistry (Springer-Verlag) and Methods in Pharmacology and Toxicology (Springer-Verlag). She is currently Council Member of Chemical Research Society of India and is one of the conveners of CRSI-Rajasthan chapter. She is actively involved in promotion of chemical education program and is resource person in Refresher courses for Teachers and workshops on Research Methodology and Scientific Writing for research students. She has organized several National and International Conferences and has delivered Invited Talks in National and International Conferences & Symposiums in India and abroad. Twelve students have obtained Ph.D. under her supervision.

Dr. Neelima Gupta was **Awarded** on Republic Day (2009) for **Excellence in Research** based on **High H-Index** among Top Researchers of University by the Vice-Chancellor, University of Rajasthan. She was honored for Excellence in Research during “National Seminar on Botanical Products” at Jaipur (2005).

Major Areas of Research: Organic Synthesis, Phosphorus Heterocycles, Computational Chemistry

No. of Indexed Research Publications: 65

Citations and H-index

Google Scholar H-Index – 20 ; Citation 871; i10-index 33

Researchgate H-index – 17; Citations 708; RG Score 32.36

Scopus H-Index – 16 ; Citation 630

Some Representative Publications

1. Substituent Dependent Anomeric Effects as a Source of Conformational Preference in Pyridinium Methylides; *J. Org. Chem.*, 71, 1344-1350 (2006).
2. Deprotonation of 1,2-Dialkylpyridinium Ions: A DFT Study of Reactivity and Site-selectivity, *J. Phys. Chem. A.*, 111, 8823-8828 (2007).
3. Diastereo- and regioselective Diels-Alder reactions of 2-phosphaindolizines; *Tetrahedron*, 64, 6395-6401 (2008).
4. Theoretical investigation of an unusual substituent effect on the dienophilicity of $>C=P-$ functionality present in 2-phosphaindolizines; *J. Phys. Org. Chem.*, 22, 125-129 (2009).
5. Diels-Alder reaction of 2-phosphaindolizines catalysed by organoaluminium reagent: theoretical and experimental results, *Tetrahedron Lett.*, 52, 1721-1724 (2011).
6. 1,5-Electrocyclization versus 1,5-proton shift in imidazolium allylides and 2-phosphaallylides: a DFT investigation, *J. Phys. Org. Chem.*, 24, 786-797 (2011)
7. Asymmetric Diels–Alder reaction with $>C=P-$ functionality of the 2-phosphaindolizine- η^1 -P-aluminium(O-menthoxy) dichloride complex: experimental and theoretical results; *Beilstein J. Org. Chem.*, 9, 392–400 (2013).
8. Synthesis of 4-Hydroxy-1H-1,3-benzazaphosphole for potential use as π -electron rich σ^2P,O hybrid ligands *Eur. J. Inorg. Chem.* (2014).
9. Molecular Recognition Pattern of Cytotoxic Alkaloid Vinblastine with Multiple Targets; *J. Mol. Graph. Model.* (2014).
10. Computational Predictions for Multi-Target Drug Design; *Methods in Pharmacology and Toxicology* (DOI 10.1007/7653_2018_26) Springer Nature (2018).

ISCB DISTINGUISHED WOMEN SCIENTISTS AWARD-2019

Dr. Namrata Rastogi

Senior Scientist

Medicinal & Process Chemistry Division CSIR-CDRI,

Lucknow-226 031



Namrata Rastogi Senior Scientist Medicinal & Process Chemistry Division CSIR-Central Drug Research Institute Lucknow-226 031 (UP), INDIA Email: namrata.rastogi@cdri.res.in Dr. Namrata Rastogi obtained Ph.D. in synthetic organic chemistry from Indian Institute of Technology, Bombay in 2006. She was postdoctoral research associate at the Indian Institute of Technology, Kanpur and University of Minnesota, Minneapolis, USA, during 2006 to 2009. Dr. Rastogi then worked as research scientist in Jubilant Biosys Drug Discovery and Development, Bengaluru, Karnataka for 2 years before joining CSIR Central Drug Research Institute, Lucknow in 2011. Dr. Rastogi's research interests include exploring new reactions of diazo compounds and visible light photoredox catalyzed organic transformations towards the synthesis of biologically active scaffolds. Her group also focuses on the design and development of molecules against parasitic diseases including malaria and leishmania. Dr. Namrata Rastogi was INSA-DFG visiting faculty in the University of Regensburg, Germany in 2014. She was also selected for the "Gregynog meeting of young organic chemists" in 2015. Dr. Rastogi is a recipient of CSIR-CDRI Incentive Award for academic performance in the year 2014. Selected Publications: Chaturvedi, A. K.; Rastogi, N. *Org. Biomol. Chem.* 2018, 15, 8155-8159; Karki, B. S.; Pramanik, M. M. D.; Kant, R.; Rastogi, N. *Org. Biomol. Chem.* 2018, 15, 7152-7156; Nagode, S. B.; Kant, R.; Rastogi, N. *Eur. J. Org. Chem.* 2018, 1533-1537; Pramanik, M. M. D.; Nagode, S. B.; Kant, R.; Rastogi, N. *Org. Biomol. Chem.* 2017, 15, 7369-7373; Nagode, S. B.; Chaturvedi, A. K.; Kant, R.; Rastogi, N. *Asian J. Org. Chem.* 2017, 6, 453-457; Pramanik, M. M. D.; Rastogi, N. *Chem. Commun.* 2016, 52, 8557-8560; Chaturvedi, A. K.; Kant, R.; Rastogi, N. *J. Org. Chem.* 2016, 81, 11291-11296; Chaturvedi, A. K.; Rastogi, N. *J. Org. Chem.* 2016, 81, 3303-3312; Pramanik, M. M. D.; Rastogi, N. *Org. Biomol. Chem.* 2016, 14, 1239-1243; Pramanik, M. M. D.; Chaturvedi, A. K.; Rastogi, N. *Chem. Commun.* 2014, 50, 12896-12898.

ISCB BEST TEACHER AWARD-2019 IN BIOLOGICAL SCIENCES

Dr. Rachna Sadana, Ph. D.

Associate Professor

Natural Sciences

University of Houston, Downtown

Houston, TX-77002

Email: sadanar@uhd.edu



EDUCATION

- 1997 – 2001 Ph.D. in Biochemistry, Kurukshetra University, Kurukshetra, India
Dissertation: “Lysosomal Proteolytic Enzymes in Brain”
- 1994 – 1996 M.S. (Biochemistry), Kurukshetra University, Kurukshetra 136119, India
- 1990 – 1993 B.S. (Chemistry, Botany and Zoology), S.D. College, Panipat 132103, India

RESEARCH, TRAINING AND PROFESSIONAL EXPERIENCE

- Sept 2015- Associate Professor of Biology and Biochemistry, University of Houston-Downtown
- 2009- 2015 Assistant Professor of Biology and Biochemistry, University of Houston-Downtown
- 2004- 2009 Postdoctoral Fellow at University of Texas health Science Center at Houston
- 2001- 2004 Postdoctoral Fellow at University of Houston-Central Campus
- 1997- 2001 Ph.D. Dissertation

RESEARCH INTERESTS

- Screening synthetic compounds to identify novel anti-cell proliferative agents
- Mathematical modeling of kinetics of cAMP formation
- Existence of preformed complexes of adenylyl cyclase and inactive G-proteins
- Integrating Research in Curriculum to Enhance Students Engagement and learning

Most Recent Publications

1. Venkataramana Reddy P. O., Mukund P. Tantak, Reyna Valdez, Rajnish Prakah Singh, Okram M Singh, **Rachna Sadana** and Dalip Kumar. Synthesis and biological Evaluation of novel carbazoyl glyoxamides as Anti-cancer and

Anti-bacterial Agents (**Accepted to Royal Society of Chemistry (RSC) Advances in Jan 2016**).

2. Buchi Vaddula, Mukund P. Tantak, **Rachna Sadana**, Michael Gonzales and Dalip Kumar. One Pot Synthesis and in-vitro anticancer evaluation of 5-(2'-indolyl)thiazoles (**Accepted to Nature Scientific Reports in Oct 2015**).
3. Cameron S. Brand, **Rachna Sadana**, Sundeep Malik, Alan V. Smrcka, and Carmen W. Dessauer. Adenylyl Cyclase 5 Regulation by G β γ Involves Isoform Specific Use of Multiple Interactions. *Molecular Pharmacology*, **2015**, 88 (4), 758-764.

ISCB BEST TEACHER AWARD-2019 IN CHEMICAL SCIENCES

Dr. Pushpendra Kumar Tripathi



PUSHPENDRA KUMAR TRIPATHI, M.Pharm. Ph.D. Associate Dean, Faculty of Pharmacy, Dr A P J Abdul Kalam Technical University, Lucknow, Adjunct Prof. , Dept. of Nanotechnology, Centre for advance Study,, Dr A P J Abdul Kalam Technical University, Lucknow & Director Pharmacy, Rameshwaram Institute of Technology and Management, Lucknow. Myself Dr. Pushpendra Kumar Tripathi completed my Masters in Pharmaceutics and Ph.D. in Pharmaceutical Sciences from Dr Harisingh Gour Central University, Sagar, India. My research work is focused on development of dendrimer based formulation for targeting and delivery of bioactives. At present, I am working as Associate Dean,in Faculty of Pharmacy, Dr A P J Abdusl Kalam Technical University, Lucknow, UP and Director Pharmacy in Rameshwaram Institute of Technology and Mannagement, Lucknow. I am also Adjunct Professor and BOS member of Department of Nanotechnology at Center for Advanced Sutdy, Dr A P J Abdual Kalam Technical University, Lucknow, Scientiifc Advisor, at Life Care Innovation Pvt. Ltd, Biotech Park, Lucknow, and plus Co- convener, BOS & R.D.C member in Faculty of Pharmacy, Dr A P J Abdual Kalam Technical University, Lucknow, UP. I was also the visiting Research faculty at Vivoform , Inc, Milwaaukee, WI ,USA. To my credit 90 students have completed their research work for Master's and Ph.D. I am recipient of GATE, UGC- JRF and CSIR-SRF fellowship from Govt. of India during my Masters and PhD work. I am life member of Indian Pharmaceutical Association, All India Pharmaceutical Teacher's Association, and Laboratory Animal Science Association of India. I am President of Indian Pharmaceutical Graduate Association, U.P state branch. I have been delivered talk as speaker/resource person in various conferences at national and international level. I have More than 30 publications in national and international journals and 03 book chapters in the international books. One of my article entitled as Dendrimer fatty acid graft for delivery of 5-FU was designated as e* by biomednet. I have also organized 02 international dendrimer symposium, 03 national seminars and 05 state level conferences in collaboration with national and international organizations in the last six years. I am also recipient of IPGA fellowship award 2017 by Indian Pharmacy Graduate Association. Scientific adviser.

ISCB YOUNG SCIENTIST AWARD-2019 IN CHEMICAL SCIENCES

Dr. Satpal Singh Badsara

Assistant Professor

Department of Chemistry (CAS)

University of Rajasthan, Jaipur

Rajasthan, India 302004

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Dr. Satpal Singh Badsara has received M.Sc. degree from Banaras Hindu University, Varanasi, India in 2006. In 2013, He obtained Ph.D. degree under the supervision of Professor D. Basavaiah at the School of Chemistry, University of Hyderabad, India. Prior to joining the University of Rajasthan as Assistant professor in 2014, Dr. Badsara has worked as postdoctoral fellow in the group of Prof. Chin-Fa Lee at National Chung Hsing University, Taiwan. His research group is working on the "Development of novel methods for organic synthesis via C-H functionalization, cross-coupling reactions and Baylis-Hillman Chemistry" and well-funded by national funding agencies with four major sponsored projects.

Dr. Badsara is a recipient of DST INSPIRE Faculty Award (2014) and SERB-India Young Scientist Award (2015). So far he has published 22 research papers in the international journals of high repute and having the high impact factor such as *Chemical Reviews*, *Green Chemistry*, *Chemical Communications*, *Chemistry: A European Journal*, *Topics in Current Chemistry* etc.

Paper Published: 22

Total Citation: 1234

Total Impact Factor: 115.342⁺

Average Citation: 56.09

H index: 11

Selected Publications:

1. C-F. Lee, R. S. Basha, **S. S. Badsara**, *Top. Curr. Chem.*, **2018**, 376, 25
1. 2.R. Bai, R. Choudhary, P. Singh R. Thakuria, M. C. Sharma, **S. S. Badsara***, *ChemistrySelect*, **2018**, 3, 3221
2. 3.P. Singh, R. Bai, R. Choudhary, M. C. Sharma, **S. S. Badsara***, *RSC Adv.*, **2017**, 7, 30594
3. 4.6. R. Choudhary, R. Bai, P. Singh, M. C. Sharma, **S. S. Badsara***, *Tetrahedron*, **2017**, 73, 4323.

4. R. Choudhary, R. Bai, P. Singh, M. C. Sharma, **S. S. Badsara***, *SynOpen*, **2018**, 2, 213
5. **S. S. Badsara**, Y-C.Liu, P-A.Hsieh, J-W.Zeng, S-Y.Lu, Y-W.Liu, C-F. Lee, *Chem. Commun.*, **2014**, 50, 11374
6. J-W.Zeng, Y-C.Liu, P-A.Hsieh, Y-T.Huang, C-L.Yi, **S. S. Badsara**, C-F. Lee, *Green Chem.*, **2014**, 16, 2644
7. D. Basavaiah, **S. S. Badsara**, B. C. Sahu, *Chem Eur. J.* **2013**, 19, 2961
8. D. Basavaiah, B. S. Reddy, **S. S. Badsara**, *Chem. Rev.*, **2010**, 110, 5447

The, Indian Society of Chemists and Biologists, India is privileged to honour Dr.Satpal Singh Badsara with 'Young Scientist Award in Chemical Sciences' of the society for the year 2019 for his outstanding contributions on peroxide promoted C-S bond formations *via* C-H functionalization and Cross-Coupling reactions.

ISCB YOUNG SCIENTIST AWARD-2019 IN BIOLOGICAL SCIENCES

Dr. Timir Tripathi

Assistant Professor & Principal Investigator,

Department of Biochemistry,

North-Eastern Hill University,

Shillong-793022, India.

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ISCB AWARD OF APPRECIATION FOR INDUSTRIAL SCIENTIST-2019

Dr. Amit Joharapurkar

General Manager

Department of Pharmacology and Toxicology

Zydus Research Centre,

Cadila Healthcare Limited,

Ahmedabad



Dr. Amit Joharapurkar is General Manager in Department of Pharmacology and Toxicology at Zydus Research Centre, Cadila Healthcare Limited, Ahmedabad. He has done M.Pharm. and Ph.D. in Pharmacology from Nagpur University.

He has contributed to the drug discovery and development of new chemical entities at Zydus Research Centre and was actively involved in development of **seven novel investigational drugs** of Zydus Research Centre and has also contributed to important studies for **Saroglitazar**. He was the project lead for three of the IND candidates namely, ZYT1, ZYGK1 and **ZYAN1 (Desidustat)**. His expertise in novel drug discovery is well appreciated by the scientific fraternity, and he has been invited to deliver talks in prestigious scientific meetings and has also been invited to write in high ranking periodicals and serves as the referee to these journals. His team has achieved many scientific awards, including Achari Award, and Keystone Symposia award. **He has received CDRI award for excellence in drug research for 2018, and also received the award for the most innovative original article published in "Drug Research" by Thieme publication, Stuttgart, Germany.**

Dr. Amit has published 47 research articles, has filed seven (7) patents, and seven (7) invited reviews.

Total Citation : 1431

H index : 19

List of selected publications:

1. Jain MR, Joharapurkar AA, Kshirsagar SG, Patel VJ, Bahekar RH, Patel HV, Jadav PA, Patel PR, Desai RC. ZY15557, a novel, long acting inhibitor of dipeptidyl peptidase-4, for the treatment of Type 2 diabetes mellitus. Br J Pharmacol. 2017; 174(14):2346-2357
2. Patel V, Joharapurkar A, Kshirsagar S, Sutariya B, Patel M, Pandey D, Patel H, Ranvir R, Kadam S, Patel D, Bahekar R, Jain M. Coagonist of GLP-1 and glucagon

decreases liver inflammation and atherosclerosis in dyslipidemic condition. *Chem Biol Interact.* 2018 8; 282:13-21.

3. Jain MR, Joharapurkar AA, Pandya V, Patel V, Joshi J, Kshirsagar S, Patel K, Patel PR, Desai RC. Pharmacological characterization of ZYAN1, a novel prolyl hydroxylase inhibitor for the treatment of anemia. *Drug Res (Stuttg).* 2016; 66(2):107-12.
4. Singh AK, Joharapurkar AA, Khan MP, Mishra JS, Singh N, Yadav M, Hossain Z, Khan K, Kumar S, Dhanesha NA, Mishra DP, Maurya R, Sharma S, Jain MR, Trivedi AK, Godbole MM, Gayen JR, Chattopadhyay N, Sanyal S. Orally active osteoanabolic agent 6-C- β -D-glucopyranosyl-(2S, 3S)-(+)- 5,7, 3',4'-tetrahydroxydihydroflavonol binds to adiponectin receptors, with a preference for AdipoR1, induces adiponectin-associated signaling and improves metabolic health in a rodent model of diabetes. *Diabetes.* 2014; 63(10):3530-44.
5. Joharapurkar AA, Pandya VB, Patel VJ, Desai RC, Jain MR. Prolyl Hydroxylase Inhibitors: A Breakthrough in the Therapy of Anemia Associated with Chronic Diseases. *J Med Chem.* 2018 Aug 23;61(16):6964-6982.

ISCB BEST THESIS AWARD -2019 IN CHEMICAL SCIENCES

Dr. Sarvesh K. Pandey

Project Scientist,
Department of Chemistry
IIT Kanpur



Thesis Title: Quantification of Aromaticity and Hydrogen Bond Strength Based on Interaction Coordinates: A New Approach

Thesis Supervisor: Professor S. Manogaran, Department of Chemistry, IIT Kanpur

Total Citation:	93
H index:	6
List of selected publications:	26
Papers in Pipeline:	7

Publications, Achievements, Honors, and Awards

1. Published 23 articles in reputed, referred, and peer-reviewed international journals like ACS, Wiley, Elsevier, Taylor and Francis, and CSIRO etc. during the PhD tenure and 3 articles in referred journals. One review paper submitted in 'Progress in Material Science, Impact Factor = 23.75" is under review process since Dec 2017 and 7 papers consisting of some new and encouraging outcomes are in pipeline.
2. Achieved 'Young Scientist Award 2018' in Chemistry in 'International Conference on Chemical Sciences: National and Global Prospective' at Lucknow Christian College, University of Lucknow during Oct 29-31, 2018.
3. Achieved 'Young Scientist Award 2018' in Chemistry through the "Venus International Research Awards (VIRA-2018) by the 'Centre for Advanced Research and Design (CARD)' of 'Venus International Foundation (VIF)' during the Annual Research Meet (ARM-2018) on Aug 11, 2018.
4. Achieved 'Best Research Award' in 'National Student Research Convention-2018' organized by IIT Kanpur during Mar 9-11, 2018.
5. Achieved 1st prize in 'Best Poster Presentation' in 'Research Scholar Day' organized by Department of Chemistry, IIT Kanpur on Feb 27, 2016.
6. Nominated for 'Bharat Jyoti Award-2016' by 'Indian International Friendship Society, India' for the excellent performance and social activities.

7. Achieved 1st prize in 'Best Oral Presentation' in 'National Symposium on Innovative Methods in Chemistry Education' organized by Department of Chemistry, University of Lucknow during Oct 8-10, 2015.
8. Qualified BARC (OCES-DGFS) (Chemistry) in 2011 and 2012.
9. Cracked CSIR-UGC-JRF (NET) (Chemical Science) in 2011.
10. Qualified GATE (Chemistry) in 2011.
1. Fellowships and Emoluments
11. SERB under the Department of Science and Technology, India for funding emolument (Project Scientist) from June 13, 2018 to till Dec 12, 2018 and will be extended later on.
12. SERB under the Department of Science and Technology, India for providing stipend (Senior Associate Researcher) from Feb 8, 2017 to June 12, 2018.
13. Fellowship by University Grants Commission, India for funding Junior Research Fellowship (2 years, 2012-2013) and Senior Research Fellowship (3 years, 2014-2016).

BEST THESIS AWARD IN BIOLOGICAL SCIENCES

Dr. Pallavi Singh

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Plot no 17-18, Knowledge park-2,
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PH.D THESIS TOPIC:“ MOLECULAR GENOTOXIC ASSESSMENT OF SMA-DMSO COMPLEX IN CELL LINES AND ANIMLS”

RESEARCH SUMMARY

In recent years, advances in field of Reproductive Biology have made significant progress in the development of new male contraceptives. With the advent of these drugs, comes the challenge of assessing their safety for mankind. Pharmacokinetic parameters need to be evaluated to assess the potency of these molecules and toxicity has to be studied at genetic & cellular level to mark their absolute safety for usage. Development of RISUG (Reversible inhibition of sperm under Guidance) as a male contraceptive by Prof.S.K Guha in IIT, Delhi raised such trepidations. RISUG is a chemical molecule composed of SMA-DMSO complex which has proved to be a potent male contraceptive.

In current research work, mutagenicity and genotoxicity assessment of SMA-DMSO was carried using standard test battery as suggested by ICH.OECD and EPA guidelines had been strictly adopted to conduct all protocols.

Objective of the current work was :

- To assess mutagenicity and genotoxicity of SMA-DMSO
- To find out MIC and safe dosage of SMA-DMSO
- To evaluate cytotoxicity of SMA-DMSO in animal cell lines
- To investigate if any DNA and chromosomal damage induced after administration of SMA-DMSO invitro and invivo.
- To assess impact of administration of SMA-DMSO on haematological parameters.
- To investigate allergenicity and skin sensitivity of SMA-DMSO.

Genotoxic assessment of RISUG (complex of Styrene maleic anhydride and Dimethyl sulphoxide) was done using Bacterial Reverse mutation assay (AMES test) and Chromosomal aberration assay. Histidine auxotrophic strains of Salmonella typhimurium TA98, TA 100 and TA102 were tested for mutagenicity after application of SMA-DMSO in dose range of 0 .01 mg to 1 mg by AMES test as per the OECD guidelines 471. Results obtained in presence of test compound were compared with positive control (mutagen CP,Benzopyrene and mitomycin) and negative control(untreated bacterial strains grown in presence of DMSO) and it was found that SMA-DMSO exhibited no genotoxicity in the observed concentration range.