Parimal Misra, Ph. D, FRSB, FRSC
Senior Professor and Chief Scientist,
Center for Innovation in Molecular and Pharmaceutical Sciences,
Dr. Reddy's Institute of Life Sciences,
University of Hyderabad Campus,
Gachibowli, Hyderabad: 500046.
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Date of Birth: 25th Feb, 1964

Academic Records:

- **B. Sc.** (1985): University of Calcutta (INDIA) - Chemistry (major), Physics, Mathematics, Bio- chemistry.
- **M.Sc**. (1987): University of Calcutta (INDIA) - Biochemistry (Molecular Biology specialization).

Doctoral Training:

- **September 1988 to 1994**: **Junior Research Fellow** and **Senior Research Fellow** of Council of Scientific and Industrial Research (CSIR) of India at Indian Institute of Chemical Biology (IICB), Calcutta, India.
- **Ph. D.** (**1995**): **Molecular cloning and sequence analysis of adenosine kinase from human parasite, *Leishmania donovani***. University of Jadavpur (INDIA). Mentor: Dr. *Alok Kr. Dutta.*

Post-doctoral Experience: (**3 years**)

- **1994 - 1995**: **Research Associate** in the Department of Biochemistry and Molecular Biology, Indian Institute of Chemical Biology, Jadavpur, India.
- **1995 - 1996**: **Post Doctoral Fellow** in the Department of Molecular Biology, Institute of Microbial Technology, Chandigarh, India. Mentor: *Dr. Pradip K Chakrabarti*

Visiting Scientist assignment: (**2 years**)

- **2000-2002**: **Visiting Scientist,** Department of Pathology, Northwestern University Medical School, Chicago, USA. **Mentor:** *Prof. Janardan K Reddy*, Former Chairman and Magerstadt Professor, Department of Pathology, Feinberg School of Medicine, Northwestern University, Chicago, USA.
- **July 2002 – Nov 2002**: **Visiting Scientist,** Reddy US Therapeutics, Norcross, Atlanta, USA. Dr. Reddy's Laboratories Limited.

Professional Experience: (>28 years)

- **Jan 2019 – till date**: **Chief Scientist and Senior Professor – Center of Innovation in Molecular and Pharmaceutical Sciences**- Dr. Reddy's Institute of Life Sciences, University of Hyderabad Campus, Hyderabad, India
- **Dec 2015 –Dec 2018**: **Dean of Academic Affairs and Senior Professor- Dept. of Biology**- Dr. Reddy's Institute of Life Sciences, University of Hyderabad Campus, Hyderabad, India
- **Jan 2013 to Nov 2015**: **Dean of Administration and Professor- Dept. of Biology**- Dr. Reddy's Institute of Life Sciences, University of Hyderabad Campus, Hyderabad, India.
- **April'09 to Dec 2012: Head-Biology -** Institute of Life Sciences, University of Hyderabad Campus, Hyderabad, India.
- **April'08 to March '09: Head- Metabolic Disorder**, Wockhardt Research Center, Aurangabad, India
- **Nov'05 to Feb'08**: **Senior Director**, Preclinical Biology and Genomics-Proteomics, Discovery Research, Dr. Reddy's, Hyderabad, India.
- **Jan'05 to Oct'05**: **Director**, Preclinical Biology and Genomics-Proteomics, Discovery Research, Dr. Reddy's, Hyderabad, India.
- **2003-2004**: **Associate Director**, Preclinical Biology and Genomics-Proteomics, Discovery Research, Dr. Reddy's, Hyderabad, India.

- **2002- 2003**: **Principal Scientist**, Molecular Discovery, Discovery Research, Dr. Reddy's, Hyderabad, India.
- **1999 - 2002**: **Senior Scientist**, Department of Discovery Biology, Dr. Reddy's, Hyderabad, India.
- **1996 - 1999**: **Scientist**, Department of Preclinical Biology, Dr. Reddy's, Hyderabad, India.

Awards:

- **Fellow of the Royal Society of Biology (UK) awarded in -2017**
- **Fellow of the Royal Society of Chemistry (UK) awarded in -2016**
- **International young scientist travel award** given by **International Union of Biochemistry and Molecular Biology** in it's 16th Congress held in Delhi, 1994.
- **Chairman's Excellence Award-2004** given by **Dr. K. Anji Reddy, Chairman of Dr. Reddy's Laboratories** "*In Recognition Of Outstanding Contribution in Target Identification through Scientific Innovation".*
- **Best Scientific Innovation Team Award-2004 (Metabolic Disorder Team), 2006 (AMPK Project Team) and 2006 (Perlecan Pharma and ICICI Deal making Team)** given by **Mr. G.V. Prasad, CEO and Mr. Satish Reddy, COO of Dr. Reddy's Laboratories** *"In Recognition of Outstanding Team Contribution in scientific value Creation Through Scientific Innovation".*
- **Most cited paper 2003-2006 Award (Biorg. Med Chem. Lett. 2003 May 19; 13(10): 1639-47) given by Bioorganic & Medicinal Chemistry Letters, Elsevier Ltd, Oxford, UK.**

Member of important organizations:

- Special Invitee, Research Council of IIIM, Jammu, India 2009-12.
- Management Council Member of Dr. Reddy's Institute of Life Sciences, Hyderabad.
- Chairman, Doctoral Committee, Institute of Life Sciences, Hyderabad, 2010-11.
- Former Academic council member of Hyderabad University-ILS Academic Council
- Member of Society of Biological Chemists, India.
- Department Committee member (2016-18): Department of Biotechnology and Bioinformatics, University of Hyderabad, Hyderabad
- Member of the National Committee for International Union of Physiological Sciences (IUPS) and International Union of Pharmacology (IUPHAR), January 1, 2024 – December 31, 2026

Management Training:

- Attended Management training course on ***Lateral Thinking*** conducted by Management guru **Edward De Bono.**
- Dr. Reddy's selected me to attend special management training program conducted by Management Council members for two years. The objective of the course is to take much bigger responsibilities and train other Directors of the organization about the sustainability and crisis management of the company.

Achievement in Industry:

Worked with the PPAR and AMPK group of **Dr. Reddy's** and contributed to put **five NCE*s*** in different clinical phases including **Balaglitazone**- Partial PPARγ agonist **(**went upto Phase3B trial**)**, **Ragaglitazar-1st in class** PPARα and γ dual activator (went upto Phase3), **DRL10945**-PPARα agonist (completed Phase2A), **DRL11605**-Pan PPAR(dropped in Phase1) and **1st in class AMPK Activator-3**(completed Phase1). Worked in AMR therapeutic area including discovery of **1st in class small molecule inhibitor of M. tb** and got **Indian patent granted** and **filed PCT**.

Research Collaboration:

1) **Northwestern University, Chicago, USA 2) University of Hyderabad 3) National Institute of Nutrition, Hyderabad 4) Devi Ahilya University, Indore, MP 5) Indian Institute of Technology, Delhi 6) Fortis Hospital, New Delhi 7) NIRMA University, Ahmedabad and 8) Asian Institute of Gastroenterology, Hyderabad 9) Indian Institute of Chemical Biology, Kolkata 10) Manipal Academy of Higher Education. Manipal and 11) Institute of Laparoscopic Surgery, Kolkata**

PUBLICATIONS:

- **Complete list of publications:**

❖ **Research Articles:**

1. Sharda Shukla, Kaushik Sarkar, Deepesh Biswas , Harshavardhan Bhuktar, Varadaraj Bhat Giliyaru, Sandipan Chakraborty, Srinivas Oruganti, Parimal Misra, Manojit Pal. An inexpensive, metal-free and one-pot approach towards N-sulfonyl amidines: Identification of a chorismate mutase inhibitor with activities against S. aureus. ***Journal of Molecular Structure*** 1312 (2024) 138531

2. Bhavya Surekha, Parimal Misra, Anitha C. Thippaiah, Bindiganavale R. Shamanna, Aiswarya Madathil and Marina Rajadura. A microneedle transdermal patch loaded with iron (II) nanoparticles for non-invasive sustained delivery to combat anemia. ***Mater. Adv***., 2024, 5, 3247–3256

3. PIMT regulates hepatic gluconeogenesis in mice. Kapadia B, Behera S, Kumar ST, Shah T, Edwin RK, Babu PP, Chakrabarti P, Parsa KVL*, Misra P***. *iScience***. 2023 Feb 2;26(3):106120. doi: 10.1016/j.isci.2023.106120. eCollection 2023 Mar 17. PMID: 36866247 Free PMC article**.**

4. PIMT Controls Insulin Synthesis and Secretion through PDX1. Sharma R, Maity SK, Chakrabarti P, Katika MR, Kapettu S, Parsa KVL*, Misra P*. ***Int J Mol Sci***. 2023 Apr 29;24(9):8084. doi: 10.3390/ijms24098084.PMID: 37175791 Free PMC article**.**

5. TGS1/PIMT regulates pro-inflammatory macrophage mediated paracrine insulin resistance: Crosstalk between macrophages and skeletal muscle cells. Naga Lakshmi Challa, Ankita Sarkar, K Satyamoorthy, Phanithi Prakash Babu, Partha Chakrabarti*, Kishore VL Parsa*, Parimal Misra***. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease.*** Vol 1870, Issue 1, Jan 2024,166878. Publication date: 4th Sept, 2023.

6. TGS1/PIMT knockdown reduces lipid accumulation in adipocytes, limits body weight gain and promotes insulin sensitivity in mice. Rebecca Kristina Edwin, Lavanya Prakash Acharya, Sujay K Maity, Partha Chakrabarti, Om Tantia, Manjunath B Joshi, Kapaettu Satyamoorthy*, Kishore VL Parsa*, Parimal Misra***. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease.*** Vol 1870, Issue 1, Jan 2024,166896. Publication date: 24th Sept, 2023

7. De novo design of anti-tuberculosis agents using a structure-based deep learning method. Krishnan SR, Bung N, Padhi S, Bulusu G, Misra P, Pal M, Oruganti S, Srinivasan R, Roy A. ***J Mol Graph Model.*** 2023 Jan;118: 108361. doi: 10.1016/j.jmgm.2022.108361. Epub 2022 Oct 13. PMID: 36257148

8. Wang resin catalysed sonochemical synthesis of pyrazolo[4,3-d]pyrimidinones and 2,3-dihydroquinazolin-4(1H)-ones: Identification of chorismate mutase inhibitors having effects on Mycobacterium tuberculosis cell viability. Shukla S, Nishanth Rao R, Bhuktar H, Edwin RK, Jamma T, Medishetti R, Banerjee S, Giliyaru VB, Shenoy GG, Oruganti S, **Misra P**, Pal M. ***Bioorg Chem***. 2023 May;134:106452. doi: 10.1016/j.bioorg.2023.106452. Epub 2023 Mar 2.PMID: 36889201

9. PHLPPs: Emerging players in metabolic disorders. Balamurugan K, Chandra K, Sai Latha S, Swathi M, Joshi MB, Misra P, Parsa KVL. ***Drug Discov Today***. 2022 Oct;27(10):103317. doi: 10.1016/j.drudis.2022.07.002. Epub 2022 Jul 11. PMID: 35835313 Review.

10. Sonochemical synthesis and biological evaluation of isoquinolin-1(2H)-one/isoindolin-1-one derivatives: Discovery of a positive ago-allosteric modulator (PAAM) of $5HT_{2C}$R. Sandeep Kumar J, Naimisha R, Thirupataiah B, Sujeevan Reddy G, Bung N, Roy A, Bulusu G, Mishra A, Yadav PN, Misra P, Pal M. ***Bioorg Chem***. 2022 Dec;129:106202. doi: 10.1016/j.bioorg.2022.106202. Epub 2022 Oct 14. PMID: 36272252

11.Pd/Cu-catalyzed access to novel 3-(benzofuran-2-ylmethyl) substituted (pyrazolo/benzo)triazinone derivatives: their *in silico*/*in vitro* evaluation as inhibitors of chorismate mutase (CM). Reddy GS, Shukla S, Bhuktar H, Hossain KA, Edwin RK, Giliyaru VB, Misra P, Pal M. ***RSC Adv***. 2022 Sep 21;12(41):26686-26695. doi: 10.1039/d2ra05255e. eCollection 2022 Sep 16. PMID: 36275143

12. Rebecca Kristina Edwin, Nagalakshmi Challa, Rahul Sharma, K. Satyamoorthy, Kishore Parsa*, Parimal Misra*****: PIMT/TGS1: An evolving metabolic molecular switch with conserved methyl transferase activity. ***Drug Discovery Today***. Volume 27, Number 8, August **2022**

13. Amberlyst-15 catalysed synthesis of novel indole derivatives under ultrasound irradiation: Their evaluation as serotonin 5-HT_{2C} receptor agonists. Reddy GS, Kamaraj R, Hossain KA, Kumar JS, Thirupataiah B, Medishetti R, Sushma Sri N, Misra P, Pal M. ***Bioorg Chem***. 2021 Nov;116:105380. doi: 10.1016/j.bioorg.2021.105380. Epub 2021 Oct 2.PMID: 34670330

14.G. S. Reddy, K. A. Hossain, J. S. Kumar, B. Thirupataiah, R. K. Edwin, V. B. Giliyaru, R. C. Hariharapura, G. G. Shenoy, P. Misra and M. Pal. Novel isatin-indole derivatives as potential inhibitors of chorismate mutase (CM): their synthesis along with unexpected formation of 2-indolylmethylamino benzoate ester under Pd-Cu catalysis. ***RSC Advances 2020***, in press, doi: 10.1039/c9ra09236f

15. Seshadri S, Rapaka N, Prajapati B, Mandaliya D, Patel S, Muggalla CS, Kapadia B, Babu PP, Misra P***** and Saxena U***.** Statins exacerbate glucose intolerance and hyperglycemia in a high sucrose fed rodent model. ***Sci Rep.*** **2019** Jun 19; 9(1):8825. doi: 10.1038/s41598-019-45369-8. ***** *Corresponding author*

16.Gangireddy Sujeevan Reddy, Ampalam Venkata Snehalatha, Rebecca Kristina Edwin, Kazi Amirul Hossain, Varadaraj Bhat Giliyaru, Raghu Chandrashekhar Hariharapura, G. Gautham Shenoy, Parimal Misra and Manojit Pal. Synthesis of 3-indolylmethyl substituted (pyrazolo / benzo)triazinone derivatives under Pd/Cu-catalysis: identification of potent inhibitors of chorismate mutase (CM) . ***Bioorganic Chemistry 2019, 91***

17. Bung N, Surepalli S, Seshadri S, Patel S, Peddasomayajula S, Kummari LK, Kumar ST, Babu PP, Parsa KVL, Poondra RR, Bulusu G[*], Misra P*****. 2-[2-(4-(trifluoromethyl) phenylamino)thiazol-4-yl]acetic acid (Activator-3) is a potent activator of AMPK. ***Sci Rep*****.** **2018** Jun 25;8(1):9599. doi: 10.1038/s41598-018-27974-1. ******Joint corresponding author*

18. Behera S, Kapadia B, Kain V, Alamuru-Yellapragada NP, Murunikkara V, Kumar ST, Babu PP, Seshadri S, Shivarudraiah P, Hiriyan J, Gangula NR, Maddika S, Misra P, Parsa KVL ERK1/2 activated PHLPP1 induces skeletal muscle ER stress through the inhibition of a novel substrate AMPK. ***Biochim Biophys Acta***. **2018** May;1864(5 Pt A):1702-1716

19.Talari M[1], Nayak TK[1], Kain V[1], Babu PP[2], **Misra P[1]**, Parsa KV[3]: MicroRNA-712 restrains macrophage pro-inflammatory responses by targeting LRRK2 leading to restoration of insulin stimulated glucose uptake by myoblasts. **Mol Immunol. 2017** Feb;82:1-9. doi: 10.1016/j.molimm.2016.12.014. Epub 2016 Dec 16.

20..Khanapur M[1], Alvala M[2], Prabhakar M[1], Shiva Kumar K[3], Edwin RK[2], Sri Saranya PS[4], Patel RK, Bulusu G[5], Misra P[2], Pal M[6]. Mycobacterium tuberculosis chorismate mutase: A potential target for TB. ***Bioorg Med Chem***. **2017** Mar 15;25(6):1725-1736. doi: 10.1016/j.bmc.2017.02.001. Epub 2017 Feb 4

21. Vasundhara Kain, Bandish Kapadia, Navin Viswakarma, Sriram Seshadri[2], Bhumika Prajapati, Prasant K Jena, Chandana Lakshmi Teja Meda, Sashidhara Kaimal Suraj, Sireesh T Kumar, Phanithi Prakash Babu, Bayar Thimmapaya, Janardan K Reddy, Kishore V. L. Parsa[*]and Parimal Misra***:** Co-activator binding protein PIMT mediates TNF-α induced insulin resistance in skeletal muscle via the transcriptional down-regulation of MEF2A and GLUT4. ***Sci. Rep***. **5**, **15197;** doi: 10.1038/srep15197 (**2015**).

22. Vasundhara Kain, Bandish Kapadia, Parimal Misra*****and Uday Saxena*:Simvastatin may induce insulin resistance through a novel a fatty acid mediated cholesterol independent mechanism**. *Sci. Rep*. 5**, **13823**; doi: 10.1038/srep13823 (**2015**).

23. Malathi Talari, Bandish Kapadia1, Vasundhara Kain, Sriram Seshadri, Bhumika Prajapati, Prasant K Jena, Parimal Misra, Kishore V. L. Parsa: MicroRNA-16 inhibits pro-inflammatory responses of M1 macrophages leading to improved insulin sensitivity in skeletal muscle. ***Biochieme*** **2015** Oct 8**.** pii: S0300-9084(15)00314-4. doi: 10.1016/j.biochi.2015.10.004

24.Pradip K Sasmal, Mahaboobi Jaleel, P Tirumala Rao, M Munikumar, Megha Bhattacharya, Nutakki Ravi Kumar, Poondla Neelima, Khaji Abdul Rawoof, P Narasimha Rao, Chandrasekhar Abbineni, M Roshaiah, S Sridhar, Thammera Ranjith Kumar, Menon CA Vinu, Vijay Potluri, Parimal Misra, Rashmi Talwar, Saibal Kumar Das: Novel 4-Oxothienopyrimidinyl Propanoic Acid Derivatives as AMP Activated Protein Kinase (AMPK) Activators. **Letters in Drug Design & Discovery** 2014,11 (6), 778-785

25. Parimal Misra***** and Janardan K Reddy**:** Peroxisome proliferator-activated receptor-α activation and excess energy burning in hepatocarcinogenesis. ***Biochimie***. **2014** Mar; 98:63-74.* *Corresponding author*

26. Bandish Kapadia, Navin Viswakarma Kishore VL Parsa, Soma Behera[*], Vasundhara Kain[*],Sasidhara Kaimal Suraj, P. Prakash Babu[†], Anand Kar, Sunanda Panda[‡], Yuzhi Jia[§], Bayar Thimmapaya[‖], Yi-jun Zhu[§], Janardan K. Reddy***** and Parimal Misra*****. ERK2-mediated phosphorylation of transcriptional coactivator binding protein PIMT/NCoA6IP at Ser[298] augments hepatic gluconeogenesis. ***PloS One, December 2013 | Volume 8 | Issue 12 | e83787***

27. Navin Viswakarma[‡1], Yuzhi Jia [‡1], Liang Bai [‡], Aurore Vluggens [‡], Qian Gao[‡], Bingliang Lin[‡], Xiaohong Zhang[‡], Parimal Misra[§], Ajay Rana[¶], Sanjay Jain[|], Frank J. Gonzalez [‖], Yi-Jun Zhu[‡], Bayar Thimmapaya[≠], and Janardan K. Reddy[‡2] Med1 Subunit of the Mediator Complex Induces Liver Cell Proliferation and is Phosphorylated by AMPK. ***Journal of Biological Chemistry, VOL. 288, NO. 39, pp. 27898–27911, September 27, 2013***

28. D. Rambabu, S. K. Kumar, B. Y. Sreenivas, S. Sandra, A. Kandale, P. Misra**,** M. V. B. Rao, M. Pal, Ultrasound-based approach tospiro-2,3-dihydroquinazolin-4(1*H*)-ones: Their *in vitro* evaluation against chorismate mutase,***Tetrahedron Letters 2013, 54, 495-501***

29. B. Prasad, R. Adepu, S. Sandra, D. Rambabu, G. R. Krishna, C. M. Reddy, G. S. Deora, P. Misra, M. Pal, $AlCl_3$ mediated unexpected migration of sulfonyl group: regioselective synthesis of 7-sulfonyl indoles of potential pharmacological interest.***Chem. Commun. 2012, 48, 10434.***

30. K. S. Kumar, R. Adepu, S. Sandra, D. Rambabu, G. R. Krishna, C. M. Reddy, P. Misra, M. Pal, Cu-mediated *N*-arylation of 1,2,3-triazin-4-ones: Synthesis of fused triazinone derivatives as potential inhibitors of chorismate mutase.***Bioorg. Med. Chem. Lett. 2012, 22, 1146***

31. K. S. Kumar, D. Rambabu, S. Sandra, R. Kapavarapu, G. R. Krishna, M. V. B. Rao, K. Chatti, C. M. Reddy, P. Misra and M. Pal, $AlCl_3$ induced (hetero)arylation of 2,3-dichloroquinoxaline: A one-pot synthesis of mono/disubstituted quinoxalines as potential antitubercular agents.***Bioorg. Med. Chem. 2012, 20, 1711***

32. R. Adepu, K. S. Kumar, S. Sandra, D. Rambabu, G. R. Krishna, C. M. Reddy, A. Kandale, P. Misra, M. Pal, C-N bond formation under Cu-catalysis: Synthesis and *in vitro* evaluation of *N*-aryl substituted thieno[2,3-*d*]pyrimidin-4(3*H*)-ones against chorismate mutase. ***Bioorg. Med. Chem. 2012, 20, 5127***

33. Alinakhi, B. Prasad, R. M. Rao, U. Reddy, S. Sandra, R. Kapavarapu, D. Rambabu, G. R. Krishna, C. M. Reddy, R. Kishore, P. Misra, J. Iqbal and M. Pal. A new route to indoles via in situ desilylation-Sonogashira strategy: Identification of novel small molecules as potential anti tuberculosis agents. ***Med Chem Commun, 2011, 2, 1006.***

34.T. R. Reddy, L. S. Reddy, G. R. Reddy, N.V. Subbaiah, Y. Lingappa, S. Sandra, R. Kapavarapu, P. Misra, M. Pal. A Pd-mediated new strategy to functionalized 2-aminochromenes: Their in vitro evaluation as potential anti tuberculosis agents. ***Bioorg. Med. Chem. Lett. 2011, 21, 6433***

35. Misra P**,** Owuor ED, Li W, Yu S, Qi C, Meyer K, Zhu YJ, Rao MS, Kong AN, Reddy JK. Phosphorylation of transcriptional coactivator PBP: Stimulation of transcriptional regulation by mitogen-activated Protein kinase. ***J Biol Chem 2002 Dec 13; 277(50): 48745-54.***

36. Misra P**,** Qi C, Yu S, Shah SH, Cao WQ, Rao MS, Thimmapaya B, Zhu Y, Reddy Janardan K. Interaction of PIMT with transcriptional coactivators CBP, p300 and PBP: Differential role in transcriptional regulation**.** ***J Biol Chem 2002 Mar 23; 277(22): 20011-19.***

37. Misra P, Ranjan Chakrabarti, R. K Vikramadithyan, B Gopalakrishnan, J Suresh, H Jagdeshan, G Cynthia, Abdul Rajjak, Papreddy Kashireddy, SongtaoYu, Sailesh Surapureddi, Chao Qi, Yi-Jun Zhu, M. Sambasiva Rao, Janardan K. Reddy and R. Rajagopalan. PAT5A: A partial agonist/antagonist of PPARγ is a potent antidiabetic thiazolidinedione yet weakly adipogenic. ***J Pharma Experiment Therapeutics, Aug 2003, 306(2):763 –771.***

38. Crawford SE, Qi C**,** Misra P**,** Stellmach V, Rao MS, Engel JD, Zhu Y, Reddy JK. Defects of the heart, eye, and megakaryocytes in peroxisome proliferator activator receptor-binding protein (PBP) null embryos implicate GATA family of transcription factors. ***J Biol Chem 2002 Feb 1; 277(5): 3585-92.***

39. Parimal Misra: AMPK, a next generation target for total metabolic control: ***Expert Opinion On Therapeutic Targets, 2008, 12(1), pp 91-100.***

40. Parimal Misra and Ranjan Chakrabarti: Role of AMP Kinase in Diabetes**. I*ndian J Med Res 125, March 2007, pp 389-39***

41. Banerjee S K*****, Misra P*****, Bhatt K, Mande SC, Chakraborti PK. Identification of an ABC transporter gene that exhibits mRNA level overexpression in fluoroquinolone-resistant Mycobacterium smegmatis**.** ***FEBS Lett 1998 Mar 20; 425(1): 151-6. (* Both are First author).***

42. Manojit Pal, Venugopal Rao Veeramaneni, Sanjeev Kumar, Akhila Vangoori, Ramesh Mullangi, Parimal Misra, Shaikh Abdul Rajjak, Vidya B. Lohray, Seshagiri Rao Casturi and Koteswar Rao Yeleswarapu. ***Letters in Drug Design & Discovery, pp. 329-340, Volume 2, No. 4, 2005.***

43. Singh SK, Saibaba V, Rao KS, Reddy PG, Daga PR, Rajjak SA, Misra P, RaoYK. Synthesis and SAR/3D-QSAR studies on the COX-2 inhibitory activity of 1,5-diarylpyrazoles to validate the modified pharmacophore. ***Eur J Med Chem. 2005 Oct; 40(10): 977-90.***

44. Ranjan Chakrabarti, Parimal Misra, Reeba K Vikramadithyan , Mamnoor Premkumar, Jagdeshan Hiriyan, Srinivas R Datla, Ravi K Damarla, Juluri Suresh and Ramanujam Rajagopalan. Antidiabetic and hypolipidemic potential of DRF 2159- a dual activator of PPARα and PPARγ. ***Eur J Pharmacol. 2004 May 3; 491(2-3): 195-206.***

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*** Most cited paper 2003-2006 Award given by Bioorganic & Medicinal Chemistry Letters, Elsevier Ltd, Oxford, UK.**

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52. G R Madhavan, R Chakrabarti, R K Vikramadithyan, Rao NVS Mamidi**,** V Balraju, B.M.Rajesh, Parimal Misra, SKB Kumar, B B Lohray, V B Lohray and R. Rajagopalan. Synthesis and Biological activity of Novel Pyrimidinone containing Thiazolidinedione derivatives. ***Bioorg Med Chem. 2002 Aug; 10(8): 2671-80.***

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- **Technology Transferred/Patents, If any. (State whether patents were commercialized)**

Prof. Misra and his team worked with the PPAR and AMPK group of Dr. Reddy's in the Therapeutic Area of Diabetes, obesity and Inflammation and contributed significantly to put **five NCEs** in different clinical phases including

- **Balaglitazone**- Partial PPARγ agonist **(**Completed **Phase3A** clinical trial**)**,
- **Ragaglitazar-1st in class** PPARα and γ dual activator (went up to **Phase3A** clinical trial),
- **DRL10945**-PPARα agonist (completed **Phase2A** clinical trial),
- **DRL11605**-Pan PPAR (dropped in **Phase1** clinical trial)
- **DRL16536**, a **1st in class AMPK activator** (completed **Phase1** clinical trial).

Balaglitazone and Ragaglitazar were out -licensed to **Novo Nordisk** and **AMPK activator** was out lisenced to **Perlecan pharma and ICICI joint ventures** and these deals generated revenues for Dr. Reddy's Laboratories Limited, Hyderabad. **Dr. Reddy's and Rheoscience announce headline results from *First Phase III clinical trial of Balaglitazone (DRF 2593)***

Best Ten publications:

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3. TGS1/PIMT regulates pro-inflammatory macrophage mediated paracrine insulin resistance: Crosstalk between macrophages and skeletal muscle cells. Naga Lakshmi Challa, Ankita Sarkar, K Satyamoorthy, Phanithi Prakash Babu, Partha Chakrabarti*, Kishore VL Parsa*, Parimal Misra****. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease.*** Vol 1870, Issue 1, Jan 2024,166878. Publication date: 4th Sept, 2023.

4. TGS1/PIMT knockdown reduces lipid accumulation in adipocytes, limits body weight gain and promotes insulin sensitivity in mice. Rebecca Kristina Edwin, Lavanya Prakash Acharya, Sujay K Maity, Partha Chakrabarti, Om Tantia, Manjunath B Joshi, Kapaettu Satyamoorthy*, Kishore VL Parsa*, Parimal Misra****. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease.*** Vol 1870, Issue 1, Jan 2024,166896. Publication date: 24th Sept, 2023

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6. Wang resin catalysed sonochemical synthesis of pyrazolo[4,3-d]pyrimidinones and 2,3-dihydroquinazolin-4(1H)-ones: Identification of chorismate mutase inhibitors having effects on Mycobacterium tuberculosis cell viability. Shukla S, Nishanth Rao R, Bhuktar H, Edwin RK, Jamma T, Medishetti R, Banerjee S, Giliyaru VB, Shenoy GG, Oruganti S, **Misra P**, Pal M. ***Bioorg Chem***. 2023 May;134:106452. doi: 10.1016/j.bioorg.2023.106452. Epub 2023 Mar 2.PMID: 36889201

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Best five publications relevant to this work:

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