

Curriculum Vitae: Prof Sarala Balachandran

1. Personal Information

- **Full Name:** Prof. Sarala Balachandran
- **Designation:** Adjunct Professor
- **Department/Discipline:** Department of Chemistry
- **Date of Birth:** March 6, 1963
- **Gender:** Female
- **Nationality:** Indian
- **Address for Correspondence:** B6 GF, Parsavnath Greenville, Sohna Road, Gurgaon 122018
- **Mobile Number:** +919560020015
- **Email ID:** saralabalachandran.chem@gurugramuniversity.ac.in
- **LinkedIn/Research Profile (if any):**

2. Career Objectives:

To be successful and attain the best possible as a scientist and contribute effectively in the area of research and impart knowledge gained through experience. To be of use to the nation at various levels. Satisfied that many of these objectives could be achieved during my career of 38 years before retirement. Actively pursuing the same at the present position as well. Currently, at the University to establish the Department of Chemistry and make into a place of choice for both students and researchers and to establish effective collaboration via industry or research institute connections.

3. Educational Qualifications

- Schooling at Carmel Convent and Loreto Convent, Lucknow
- MSc in Organic Chemistry from Lucknow University, Lucknow
- PhD while working at CSIR-CIMAP & CSIR-CDRI, Lucknow
- Post-Doctoral studies at Cambridge University, England 1991-1993
- Post-Doctoral studies at the Institut Armand Frappier, Quebec, Canada 1996-1997
- Post-Doctoral studies at Virginia Tech, Blacksburg, VA, USA 1999-2000

4. Teaching Experience

- Total Teaching Experience: 13.5 Years as Professor of AcSIR and as Adjunct Professor at GUG

5. Research Experience

- Total Research Experience: 38 years (Both India and abroad in Industry, Research Institute and Academia)
- **April 2023 - present:** Currently working as **Chairperson**, Department of Chemistry and Adjunct Professor at Gurugram University, Gurugram, Haryana
- **March 2021- March 2023:** **Chief Scientist and Head** of the Recruitment and Assessment Board of CSIR (CSIR-RAB).
- **April 2016 – March 2021:** **Chief Scientist & Head, HR Division** at CSIR-IGIB, Delhi
- **January 2011-March 2016:** **Chief Scientist (Scientist G) & Project Director** Open Source Drug Discovery (OSDD) at the Council of Scientific & Industrial Research (CSIR) headquarters.
- **Feb 2006-Jan 2011:** **Ass Director** at Piramal Life Sciences Ltd (PLSL, formerly known as Nicholas Piramal Research Centre), Mumbai
- **2001-2006:** Worked as **Group-leader** in the New Drug Discovery Research (NDDR) Group at Ranbaxy Research Laboratories (now, Sunpharma), Gurgaon, India

- **1999-2000: Post-doctoral** work at the Virginia Polytechnic Institute & State University, Blacksburg, Virginia, USA (with Prof. David Kingston on the synthesis of Taxol analogs)
- **1996-1997:** Sabbatical from Ranbaxy to carry out **Post-doctoral** work at the Institute Armand-Frappier, Quebec, Canada with Prof Zamir working on synthesis, biosynthesis and isolation of taxol and related anticancer compounds
- **1994-1999: Research Scientist** at Ranbaxy Research Laboratories (RRL), Gurgaon (India)
- **1991-1993: Post-doctoral** fellowship with Prof. Sir Alan Battersby FRS at the Cambridge University, England UK (Biosynthesis of Vitamin B₁₂ and related porphyrins)
- **1985-1990:** At CSIR-CIMAP & CSIR-CDRI **PhD** and post PhD work at IIT, Delhi

6. Publications

(A) Research Papers in Journals

1. Instrumental in coordinating inter-sectoral meeting to suggest policy in the area of ‘**Antibiotic Use and Resistance in Food Animals Current Policy and Recommendations Policy**’ and handing over to Department of Health, was uploaded on **CDDEP (Centre for Disease Dynamics Economics & Policy), Washington DC. Published on CDDEP website.**
(https://onehealthtrust.org/wp-content/uploads/2017/06/india_abx_report-2.pdf)

DETAILED LIST OF PATENTS

1. **Insulin like growth factor -1 receptor inhibitor**
S Balachandran, C J Dinsmore, A Roychowdhury R Sharma, R A Vishwakarma
US 61477937, April 21, 2011
2. **Patent application title: Insulin-Like Growth Factor-1 Receptor Inhibitors**
Inventors: Sarala Balachandran (New Delhi, IN) Christopher J. Dinsmore (Boston, MA, US) Abhijit Roychowdhury (Mumbai, IN) Rajiv Sharma (Mumbai, IN) Ram Asrey Vishwakarma (Jammu, IN)
Assignees: Piramal Enterprises Limited Merck Sharp & Dohme Corp.
IPC8 Class: AC07D41314FI **USPC** Class: 5142325
Class name: Plural morpholine rings attached directly or indirectly to each other by nonionic bonding additional hetero ring attached directly or indirectly to the morpholines by nonionic bonding polycyclo ring system having the additional hetero ring as one of the cyclos
Publication date: 2014-02-13
Patent application number: 20140045832
3. **Novel Migration Inhibitory Factor (MIF) inhibitors**
Balachandran Sarala, Parkale Santosh, Dagia Nilesh M, Srinivasan Shaila, Bose Julie, Sharma Somesh and Vishwakarma Ram A. (Piramal Life Sciences Limited, India).US patent application filed.
4. **Preparation of diamines as tumor necrosis factor alpha inhibitors**
Balachandran, Sarala; Vishwakarma, Ram A; Kaki, Venkatrao; Yadav, Vitthal; Chauthe, Siddheshwar; Sharma, Somesh; Parikh, Sapna; Kharas, Firuza. (Piramal Life Sciences Limited, India). PCT Int. Appl. (2008), WO 2008142623 A2 20081127
5. **Pyrazolo[3,4-b]pyridine derivatives as phosphodiesterase inhibitors and their preparation, pharmaceutical composition and use in the treatment of diseases.** Rudra, Sonali; Gupta, Nidhi; Baregama, Lalit Kumar; Agarwal, Ritu; Khairnar, Vinayak Vasantrao; Ramaiah, Mandadapu Raghu; Palle, Venkata P.; **Balachandran, Sarala;** Kondaskar, Atul; Salla, Manohar; Ray, Abhijit; Dastidar, Sunanda G.; Vijaykrishnan, Lalitha. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2008), WO 2008111010 A1 20080918

6. **Pyrazolo[3,4-b]pyridine derivatives as phosphodiesterase inhibitors and their preparation, pharmaceutical composition and use in the treatment of diseases.**Rudra, Sonali; Gupta, Nidhi; Baregama, Lalit Kumar; Agarwal, Ritu; Ramaiah, Mandadapu Raghu; Khairnar, VinayakVasantrao; Palle, Venkata P.; **Balachandran, Sarala**; Ray, Abhijit; Dastidar, Sunanda G.; Vijaykrishnan, Lalitha. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2008), WO 2008111009 A1 20080918
7. **Preparation of 1,3,4-oxadiazoles as phosphodiesterase IV inhibitors for treating CNS and inflammatory diseases.**
Balachandran, Sarala; Gupta, Nidhi; Khairnar, Vinayak Vasantrao; Rudra, Sonali; Palle, Venkata P.; Dastidar, Sunanda G.. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2008), WO 2008035316 A2 20080327
8. **Preparation of spiroisoxazoline derivatives as inhibitors of phosphodiesterase type-IV.**
Balachandran, Sarala; Gupta, Nidhi; Muthukaman, Nagarajan; Khairnar, VinayakVasantrao; Ramnani, Sarika; Baregama, Lalit K.; Chakladar, Saswati; Ramaiah, Mandadapu Raghu; Agarwal, Ritu; Dastidar, Sunanda G.; Ray, Abhijit. (India). U.S. Pat. Appl. Publ. (2008),Cont.-in-part of U.S. Ser. No. 930,569. US 2008009535 A1 20080110 Application: US 2006-390491 20060327.
9. **Preparation of isoxazolines as inhibitors of phosphodiesterase type-IV (PDE-IV).****Balachandran, Sarala**; Gupta, Nidhi; Muthukaman, Nagarajan; Khairnar, VinayakVasantrao; Ramnani, Sarika; Baregama, Lalit K.; Chakladar, Saswati; Ramaiah, Mandadapu Raghu; Agarwal, Ritu; Dastidar, Sunanda G.; Ray, Abhijit. (Ranbaxy Laboratories Limited, India). Eur. Pat. Appl. (2007), EP 1840123 A1 20071003
10. **Oxazine derivatives, processes for preparing them, pharmaceutical compositions containing them, and their use as inhibitors of PDE (phosphodiesterase) type IV.**Palle, Venkata P.; **Balachandran, Sarala**; Ramnani, Sarika; Ray, Abhijit; Dastidar, Sunanda G. (Ranbaxy Laboratories Ltd., India). PCT Int. Appl. (2007) WO 2007046022 A2 20070426
11. **Preparation of pyrazolo[3,4-b]pyridines as phosphodiesterase IV inhibitors.**Palle, Venakta P.; **Balachandran, Sarala**; Gupta, Nidhi; Khairnar, VinayakVasantrao; Ramaiah, Raghu; Ray, Abhijit; Dastidar, Sunanda Ghose. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2007), WO 2007031838 A1 20070322
12. **Preparation spiroisoxazolylpyrazolopyridinamines as phosphodiesterase IV inhibitors.**
Palle, Venkata P.; **Balachandran, Sarala**; Gupta, Nidhi; Khairnar, VinayakVasantrao; Ramaiah, Raghu; Ray, Abhijit; Dastidar, Sunanda G.. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2007), WO 2007031977 A2 20070322
13. **Preparation of indazolylisoxazoles as phosphodiesterase IV inhibitors.**
Palle, Venakta; **Balachandran, Sarala**; Baregama, Lalit Kumar; Chakladar, Saswati; Ramnani, Sarika; Muthukamal, Nagarajan; Ray, Abhijit; Dastidar, Sunanda G.. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2007), WO 2007029077 A1 20070315
14. **Preparation of isoxazolylindazoles as inhibitors of phosphodiesterase IV.**
Palle, Venkata P.; **Balachandran, Sarala**; Baregama, Lalit Kumar; Chakladar, Saswati; Ramnani, Sarika; Muthukamal, Nagarajan; Ray, Abhijit; Dastidar, Sunanda G.. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2006), WO 2006129158 A2 20061207
15. **Preparation of isoxazole-based phosphodiesterase inhibitors.**

Palle, Venkata; **Balachandran, Sarala**; Muthukama, Nagarajan; Ray, Abhijit; Dastidar, Sunanda Ghose. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2006), WO 2006117653 A1 20061109

16. **Preparation of isoxazolines as phosphodiesterase inhibitors.**

Palle, Venkata P.; **Balachandran, Sarala**; Gupta, Nidhi; Muthukamal, Nagarajan; Ramaiah, Mandadapu Raghu; Khera, Manoj Kumar; Baregama, Lailt Kumar; Kahirnar, VinayakVasantrao; Ray, Abhijit; Dastidar, Sunanda G. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2006), WO 2006085212 A2 20060817

17. **Preparation of pyrazolyl-purine derivatives for use in pharmaceutical compositions as phosphodiesterase IV (PDE IV) inhibitors.**

Palle, Venkata P.; **Balachandran, Sarala**; Salman, Mohammad; Kukreja, Gagan; Baregama, Lalit Kumar; Ray, Abhijit; Dastidar, Sunanda Ghosh. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2005), WO 2005058898 A2 20050630

18. **Preparation of isoxazolines and their analogs as phosphodiesterase inhibitors.** Palle, Venkata P.; **Balachandran, Sarala**; Gupta, Nidhi; Kukreja, Gagan; Khera, Manoj Kumar; Baregama, Lalit Kumar; Mandadapu, Raghuramaiah; Ray, Abhijit; Dastidar, Sunanda Ghose. (Ranbaxy Laboratories Limited, India). PCT Int. Appl. (2005), WO 2005051931 A2 20050609

19. **Preparation of phenylisoxazolines as inhibitors of phosphodiesterase type-IV.** Palle, Venkata P.; **Balachandran, Sarala**; Salman, Mohammad; Kukreja, Gagan; Gupta, Nidhi; Ray, Abhijit; Dastidar, Sunanda G.. (Ranbaxy Laboratories Limited, India; Ranbaxy Laboratories, Ltd.). PCT Int. Appl. (2005), WO 2005021515 A2 20050310

20. **Method for semi-synthesis of taxanes including Paclitaxel**

Zamir L, **Balachandran S**, Caron G, Vishwakarma RA
Canadian Patent No. 2188190, granted on 18 Jan 1998

21. **Preparation of novel 1-O-hemisuccinylcoleonol-bovine serum albumin protein bioconjugate useful as an immunogen.**

Tandon, Jai Shankar; Vishwakarma, Ram Asrey; Varma, Neeraj; **Balachandran, Sarala**. (Council of Scientific and Industrial Research, India). Indian (1997), Application: IN 91-DE818 19910905. Priority: CAN 139:53175 AN 2003:528117

22. **A process for the preparation of stable and water-soluble sodium (1- α -coleonoloxo) hemisuccinate as an antihypertensive.**

Tandon, Jai Shanker; Vishwakarma, Ram Asrey; Srimal, Rikhab Chand; Varma, Neeraj; **Balachandran, Sarala**. (Council of Scientific and Industrial Research, India). Indian (1997), Application: IN 91-DE821 19910905.

DETAILED LIST OF RESEARCH PUBLICATIONS

1. **Responsible for compiling ‘Antibiotic Use and Resistance in Food Animals Current Policy and Recommendations Policy’** uploaded on CDDEP (Centre for Disease Dynamics Economics & Policy), Washington DC, New Delhi website published under Global Antibiotic Research Partnership (GARP) 2016
2. **Effects of Sex Selection Drugs (SSD) on outcome of Pregnancy and Reproductive behavior of next generation –Protocol for animal study**, Sutapa B Neogi, Vinoth K M Khandelwal, AbhijitGanguli, Pragya Rai, Rakesh Gupta, **Sarala Balachandran**, World Journal of Pharmacy and Pharmaceutical Sciences Volume 5, issue 10 2016 ISSN 2278-4357 DOI: 10.20959/wjpps201610-7775

3. [Synthesis and biological activity of novel MIF antagonists.](#) Balachandran, Sarala; Gadekar, Pradip K.; Parkale, Santosh; Yadav, Vitthal N.; Kamath, Divya; Ramaswamy, Sneha; Sharma, Somesh; Vishwakarma, Ram A.; Dagia, Nilesh M. *Bioorganic & Medicinal Chemistry Letters* vol. 21 issue 5 March 1, 2011. p. 1508-1511
4. **ISO-1 Inhibits expression and /or activation of pro-inflammatory mediators implicated in MIF signal transduction pathway**, Divya Kamath, Lyle Fonseca, AnshuChetrapalKanwar, Gautam Agarwal, DebarshiChakrabarti, MuralidharaPadiguru, Shaila Srinivasan, VaidehiKorde, Koteppapari, **Sarala Balachandran**, Somesh Sharma, NileshDagia
Poster presentation at Society of Biological Chemistry meet at NCCS, Pune October 30-November 1, 2009
5. **Novel derivatives of ISO-1 as potent inhibitors of MIF biological function**, Sarala Balachandran, AtishRodge,PradipGadekar,Vithal Yadav, Divya V. Kamath,AnshuChetrapal-Kunwar,Pooja Bhatt, Shaila Srinivasan, Somesh Sharma,Ram A Vishwakarma and Nilesh M. Dagia, [Bioorganic & Medicinal Chemistry Letters](#), [Volume 19, Issue 16](#), 15 August 2009, Pages 4773-4776
6. **Pharmacology of a Novel, Orally Active PDE4 Inhibitor** Sunanda G. Dastidar, Abhijit Ray, RajkumarShirumalla, DeepaRajagopal, Shiwani Chaudhary, Kamna Nanda, Pawan Sharma, Mahesh Kumar Seth, **Sarala Balachandran**,Nidhi Gupta, VenkataPalle, *Pharmacology* 2009;83:275-286 (DOI: 10.1159/000209608)
7. **Novel inhibitors of Macrophage migration inhibitory function**, Sarala Balachandran, AtishRodge,PradipGadekar,Vithal Yadav, Divya V. Kamath,AnshuChetrapal-Kunwar,Pooja Bhatt, Shaila Srinivasan, Somesh Sharma,Ram A Vishwakarma and Nilesh M. Dagia.
Poster presentation at Gordon Research Conference at Proctor Academy, Andover, NH, June 14 to 19, 2009.
8. **A flourinated analog of ISO-1 blocks the recognition and biological function of MIF and is orally efficacious in a murine model of colitis** Nilesh M. Dagia,Pooja Bhatt, Divya V. Kamath, Ravindra D. Gupte, ShrutaDadarkar, Lyle Fonseca, **Sarala Balachandran**, Shaila Srinivasan, Julie Bose, KoteppaPari, Chandrika B-Rao, Santosh S. Parkale, Pradip K. Gadekar, Atish H. Rodge, NoopurMandrekar, Ram A. Vishwakarma, and Somesh Sharma, *Eur. J. Pharmacol.* (2009) 607, 201-212.
9. **Discovery of diacylphloroglucinols as a new class of GPR40 (FFAR1) agonists.** Bharate, Sandip B.; Rodge, Atish; Joshi, Rajendra K.; Kaur, Jaspreet; Srinivasan, Shaila; Senthil Kumar, S.; Kulkarni-Almeida, Asha; **Balachandran, Sarala**; Balakrishnan, Arun; Vishwakarma, Ram A.. Department of Medicinal Chemistry, Piramal Life Sciences Limited, Mumbai, India. *Bioorganic & Medicinal Chemistry Letters* (2008), 18(24), 6357-6361.
10. **Synthesis and evaluation of pyrazolo[3,4-b]pyridines and its structural analogues as TNF-alpha and IL-6 inhibitors.** Bharate, Sandip B.; Mahajan, Tushar R.; Gole, Yogesh R.; Nambiar, Mahesh; Matan, T. T.; Kulkarni-Almeida, Asha; **Balachandran, Sarala**; Junjappa, H.; Balakrishnan, Arun; Vishwakarma, Ram A. Department of Medicinal Chemistry, Piramal Life Sciences Limited, Mumbai, India. *Bioorganic & Medicinal Chemistry* (2008), 16(15), 7167-7176.
11. **A Fluorinated analog of ISO-1 blocks the recognition and biological function of MIF and is orally efficacious in a murine model of colitis.** NM Dagia, S Srinivasan, RD Gupte, S Sharma, RA Vishwakarma, **S Balachandran**, Scientific meeting ofAmerican college of gastroenterology, 2008
12. **Comparison of in vitro effects of Roflumilast, Dexamethasone, Monteleukast and NDGA on chemotaxin induced eosinophil shape change and cytokine release from human peripheral blood leukocytes**, C. Deb, S. Kumar, S. G. Dastidar. A. Ray, **S. Balachandran** and V Palle
9th Asian Research Symposium in Rhinology & 10th Biennial India Congress of the Tran-Pacific Allergy & Immunology Society, November 19 –23, Mumbai, 2005

13. **Synthesis of new 4-Carbonato derivatives of Taxol, S. Balachandran** and D. G. I. Kingst Poster Presentation at the Combined Southeast-Southwest Regional Meeting of ACS at New Orleans, (6-8 December 2000)
14. **Acid catalyzed rearrangement and acyl migration studies on 9-dihydro-13-acetylbaccatin-III, a major taxane from Taxus canadensis.** Zamir, Lolita O.; **Balachandran, Sarala**; Zheng, Yi Feng; Nedeia, Maria E.; Caron, Gaetan; Nikolakakis, Anastasia; Vishwakarma, Ram A.; Sauriol, Françoise; Mamer, Orval. Institut Armand-Frappier, Université du Québec, Laval, Q.C., Can. *Tetrahedron* (1997), 53(47), 15991-16008
15. **Biosynthesis of vitamin B12: mechanistic studies on the transfer of a methyl group from C-11 to C-12 and incorporation of 18O.** Li, Yongfu; Alanine, Alex I. D.; Vishwakarma, Ram A.; **Balachandran, Sarala**; Leeper, Finian J.; Battersby, Alan R. Univ. Chemical Laboratory, Cambridge, UK. *Journal of the Chemical Society, Chemical Communications* (1994), (21), 2507-8.
16. **Biosynthesis of porphyrins and related macrocycles. Part 42. Pulse labeling experiments concerning the timing of cobalt insertion during vitamin B12 biosynthesis.** **Balachandran, Sarala**; Vishwakarma, Ram A.; Monaghan, Sandra M.; Prele, Annette; Stamford, N. Patrick J.; Leeper, Finian J.; Battersby, Alan R. Univ. Chem. Lab., Cambridge, UK. *Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999)* (1994), (5), 487-91.
17. **Biosynthesis of porphyrins and related macrocycles. Part 41. Fate of oxygen atoms as precorrin-2 carrying eight labeled carboxyl groups (13C18O2H) is enzymically converted to cobyrinic acid.** Vishwakarma, Ram A.; **Balachandran, Sarala**; Alanine, Alex I. D.; Stamford, N. Patrick J.; Kiuchi, Fumiyuki; Leeper, Finian J.; Battersby, Alan R. Univ. Chem. Lab., Cambridge, UK. *Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999)* (1993), (23), 2893-9.
18. **Epi-deoxycoleonol, a new antihypertensive labdanoid diterpenoid from Coleus forskohlii.** Tandon, J. S.; Roy, R.; **Balachandran, S.**; Vishwakarma, R. A. Med. Chem. Div., Cent. Drug Res. Inst., Lucknow, India. *Bioorganic & Medicinal Chemistry Letters*, (1992), 2(3), 249-54.
19. **Mass spectral studies on artemisinin, dihydroartemisinin and artether.** Madhusudanan, K. P.; Vishwakarma, R. A.; **Balachandran, S.**; Popli, S. P. Cent. Drug Res. Inst., Lucknow, India. *Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry* (1989), 28B(9), 751-4.
20. **Studies in medicinal plants. Part XVI. A new xanthone from Hypericum mysorensense Heyne.** **Balachandran, Sarala**; Vishwakarma, R. A.; Popli, S. P. Cent. Inst. Med. Aromatic Plants, Lucknow, India. *Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry* (1988), 27B(4), 385-6.
21. **Chemical investigation of some Artemisia species: search for artemisinin or other related sesquiterpene lactones with a peroxide bridge.** **Balachandran, Sarala**; Vishwakarma, R. A.; Popli, S. P. Cent. Inst. Med. Aromatic Plants, Lucknow, India. *Indian Journal of Pharmaceutical Sciences* (1987), 49(4), 152-4.

(B) Books / Book Chapters

1. Editor of the Knowledge Book 'Towards Sustainable Future: Green Hydrogen, biofuels and renewables' was involved in compiling and editing the same. This was released at Vigyan Bhawan during the 3rd International Climate Summit on 14th September 2023
2. Partnering for clinical trial OSDD mandate-
Sarala Balachandran, Science reporter vol 51 (4), p 38
3. Contributed towards preparation of Cabinet note at CSIR HQ for OSDD project

4. Expenditure Finance Committee (EFC) Document preparation for OSDD project was also undertaken
5. Information Brochure (IB) and other regulatory documents for Clinical trial undertaken to study the efficacy and safety of new anti-TB drug PA-824 in combination with Moxifloxacin and pyrazinamide in patients of MDR TB

(C) Conference Papers

1. Third Asia-Pacific NIS Forum of Asian and Pacific Centre for Transfer of Technology (APCTT, a regional Institution of the United Nations Economic and Social Commission for Asia-Pacific Region): Diagnosis of NIS and Development of STI Strategies in the Open Innovation Framework. 8-9 April 2015, The Sukosol Bangkok, Thailand
Strategies in the Open Innovation Framework. April 8, 2015. Bangkok, Thailand. **Dr Sarala Balachandran**. Chief Scientist, CSIR &. Project Director, OSDD. Open Source Drug Discovery (OSDD) - APCTT
apctt.org/pdf/India-Dr-Sarala.pdf
2. A presentation on Open Source Drug Discovery & Development (OSDD) made by **Dr Sarala Balachandran**. Chief Scientist, CSIR &. Project Director, OSDD in the International Seminar on Innovation, Sustainability and Development New Delhi, India held on June 28-30, 2011 by UK-India Education and Research Initiative (UKIERI) ad DST hosted by NISTADS, Centre for Development Studies, Trivandrum and the STEPS Centre.
https://www.youtube.com/watch?v=nXNc0_gGcjM
3. June 3rd, 2015 10h30 – 14h30 Uppsala Konsert&Kongress, Vaksalatorg, Uppsala
Uppsala Health Summit 2015: Workshop on Research and innovation for new therapies –Open Source Drug Discovery (OSDD) and other collaborative models **Dr Sarala Balachandran**. Chief Scientist, CSIR &. Project Director, OSDD
4. Presentation carried out at the 7th International conference of **South Asian Chapter of American College of Clinical Pharmacology (SAC-ACCP)** held in Mumbai on Translational Research **Dr Sarala Balachandran** Published on Wednesday, 07 May 2014
- See more at: <http://archivepharma.financialexpress.com/latest-updates/3765-7th-international-conference-of-sac-accp-held-in-mumbai#sthash.5QqIcCp1.dpuf>
5. Speaker at 'Healthcare Leadership & Innovation, Doctors as Leaders' held at Sir Gangaram Hospital, New Rajinder Nagar, New Delhi on 23rd May, 2015.
6. Speaker on the theme: Landscape of EHS&S in Indian Industry on May 10, 2024 held by EHS&S Congress 2024 organized by Trisama Media in association with Indian Association for Air Pollution Control, Delhi
7. Delivered Key note lecture at the National Syposium Net Zero & ESG held at India International Centre (IIC), New Delhi May 30-31, 2025

7. Research Projects / Grants

- Was Project Director of CSIR-OSDD
- Lead the research project with Glaxo, England while at Ranbaxy Research Lab
- Lead the research project with Merck, US while at Nicholas Piramal

8. Conferences / FDPs / Workshops Attended:

1. Attended the **3rd International Climate Summit** on 14th September 2023 at Vigyan Bhawan where the book which I edited '**Towards Sustainable Future: Green Hydrogen, biofuels and renewables**' was released on the occasion.
2. Attended **Norway Summit on Opportunities for Green Hydrogen held at Bergen on August 30-31, 2022**. The focus was on "Opportunity for Green Hydrogen in India"
3. Chaired a session at the Annual Convention of Chemists (ACC 2023) held on 20-21st December 2023 held at IIT Delhi Campus, Hauz Khas New Delhi
4. Along with DST visited Sofia, Bulgaria representing CSIR for bilateral cooperation and presented the research being carried out at Open Source Drug Discovery Project at CSIR.
5. Got the opportunity to visit and present work to Johnson & Johnson Innovation Labs, Beers, Belgium and Merck, US
6. Was Guest of Honour at the conference 'Emerging Trends in Biotechnology & Drug Discovery' Held at CSIR-IGIB on February 10, 2017
7. While working in US, attended Conference in New Orleans
8. While working at Nicholas Piramal, attended Gordon conference at Boston, US, Anti-cancer agents at Geneva in Switzerland, Conference on drug repositioning at New Jersey
9. While working at Cambridge, England, attended IUPAC conference, at Strasbourg, France
10. While working at Ranbaxy Research Lab, attended conferences in New York, US, Copenhagen, Denmark and Malmo, Sweden

9. Awards & Achievements

I consider the following as some of my main achievements:

1. Being the first Women head of CSIR-RAB which consists of looking into all the recruitment and assessment for promotion of all the scientist across 37 institutes of CSIR in India
2. During the two years of my tenure as Head, CSIR_RAB, I was able to work with my team to complete 4 years of backlog of assessment for promotion of Scientists. This was highly appreciated by DG, CSIR as well as all the scientists in CSIR.
3. Spearheading and leading the Phase II b clinical trial in India along with Global Alliance of US when at CSIR-OSDD. The trial was with a combination of PA-824, pyrazinamide and moxifloxacin in MDR patients at NITRD, Delhi.
4. Contributed towards preparation of Cabinet note at CSIR HQ for OSDD project
5. Expenditure Finance Committee (EFC) Document preparation for OSDD project was also undertaken
6. Edited the Knowledge Book 'Towards Sustainable Future: Green Hydrogen, biofuels and renewables' was involved in compiling and editing the same. This was released at Vigyan Bhawan during the 3rd International Climate Summit on 14th September 2023.
7. As Professor, AcSIR, took classes for clinical science, guidance and assistance rendered in design of courses for students in the area of drug discovery and development and as Adjunct faculty of PHFI and was also co-guide for PhD
8. As a member of India TB Consortium, contributing towards building a pipeline of TB drugs in the country and also India panel member for TB Vaccine conference in 2018.
9. Member of India Advisory committee for AERAS stop TB international conference to be held in February 2018.

10. Was Organizing Secretary for International conference for Nuclear Tracks and Radiation Measurements (ICNTRM) held on 6-10 November, 2023 held at Gurugram University, Gurugram
11. Was Convenor for the International Conference of Diversity and Inclusivity in Chemistry (ICDIC-2023), during 22-23 November, 2023 held at Gurugram University, Gurugram
12. Convenor for one day symposium on 'Inspire, innovate, integrate: Science & Technology driven self-reliant India' on 5th November, 2024 held at Gurugram University, Gurugram
13. **Accreditation Committee (AC) Member for Environmental Impact Assessment (EIA) at QCI, NABET, Delhi from April 2023 onwards**
14. **Instrumental in getting MoU signed between Gurugram University, Gurugram and the following: CSIR-IICT, Hyderabad, CSIR-NPL, New Delhi, CSIR-NIScPR, New Delhi and Presude Life Sciences, Manesar.**
15. Responsible for inter-sectoral coordination on 'Antibiotic Use and Resistance in Food Animals Current Policy and Recommendations Policy' uploaded on **CDDEP (Centre for Disease Dynamics Economics & Policy), Washington DC, New Delhi website. (under GARP). Published on CDDEP website.**

10. Skills

- Areas of Specialization: Drug Discovery and Development including clinical trial
- A wide array of Research Projects handled
- Natural product isolation, purification, structure elucidation
- Synthesis and biosynthesis of drugs and drug like compounds
- Skilled at Intellectual property identification and patenting in the abovementioned areas
- Editing Scientific books
- Environmental and safety assessments
- Language skills: Excellent proficiency in English, Hindi and Malayalam. Intermediate proficiency in French and basic knowledge of Spanish, German and some Indian Languages
- Yoga skills: Have learnt yoga at various centers including Shivananda yoga and I am a regular practitioner
- Dance skills: Learnt Bharatanatyam for several years and performed. Also, adept at other dance forms.