DR. D. Y. PATIL BIOTECHNOLOGY & BIOINFORMATICS INSTITUTE
DR. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)
(Re-accredited by NAAC with a CGPA of 3.62 on a four- point scale at 'A' Grade)
(Category I University approved by UGC)
(An ISO 9001: 2015 & 14001:2015 Certified University),
Institute supported by DST-FIST & Approved by AICTE, Govt. of India

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Dr. Satish K Raut

Designation: Assistant Professor

Dr. D.Y. Patil Vidyapeeth's
Dr. D. Y. Patil Biotechnology and Bioinformatics Institute
Mumbai-Bangalore High way, Tathawade, Pune 411033.

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EDUCATIONAL QUALIFICATIONS:

PhD in Medical Biotechnology (2015) - Post Graduate Institute of Medical Education and Research Chandigarh, India

M.Sc Biotechnology (2006) - Department of Biotechnology, Govt. Inst. of Science, Aurangabad- **First Class**

B.Sc in Chemistry, Analytical Chemistry & Zoology (2004) - Dr. B.A.M University Aurangabad, India- **First Class**

Higher Secondary in Science (2001) – Central Board of Secondary Education- **First Class**

EMPLOYMENT EXPERIENCE:

Research Trainee, Bhabha Atomic Research Centre, Mumbai (2006-2006)

Research Assistant, National Institute of Virology, Pune (2007-2008)

Senior Research fellow, National Centre for Cell Science, Pune (2008-2009)

Junior Demonstrator, ICMR- Post Graduate Institute of Medical Education and Research, Chandigarh (2015-2017)

Senior Demonstrator, ICMR- Post Graduate Institute of Medical Education and Research, Chandigarh (2017-2020)

Assistant Professor, Dr. D. Y. Patil Biotechnology & Bioinformatics Institute, Pune (2020- Till Date)

FIELD OF SPECILAIZATION: Medical Biotechnology**,** Epigenetic study of Cardiovascular Diseases

AWARDS AND HONORS:

Dr. N.S. Dhalla award **(Best Oral Presentation),** 11th Annual **Conference** on International Society for Heart Research NIPER, Mohali Punjab, India, 2014

Best Poster Award, International Cardiovascular Research Convergence (ICRC) AIIMS, New Delhi, India, 2012

Travel Award, for International conference scientific sessions-frontiers in cardiovascular science and novel therapy, basic cardiovascular sciences **USA**, Deptt. Of Science & Technology India, 2012

Indian Council of Medical Research-**Senior Research Fellowship,** New Delhi, India, 2011

Qualified nationwide Ph.D. Entrance test PGIMER, Chandigarh, India, 2009

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Council of Scientific and Industrial Research (CSIR), National Eligibility Test (NET) for Lectureship

RESEARCH PAPERS IN PEER REVIEWED JOURNALS:

1. Anupam Mittal, Santanu Rana, Rajni Sharma, Akhilesh Kumar, **Satish K Raut**, Rishikesh Prasad, Uma saikia, Sagartirtha Sarkar, Ajay Bahl, Madhu Khullar. Myocardin ablation in a cardiac-renal rat model. **Scientific Report.** 2019 Apr 10;9(1):5872.

2. **Satish K Raut** and Madhu Khullar**.** The Big Entity of New RNA World: Long Non Coding RNAs in Microvascular Complications of Diabetes. **Frontiers in endocrinology.** 2018 Jun 4;9:300. doi: 10.3389/fendo.2018.00300.

3. Madhu Khullar, Balneek Cheema, **Satish K Raut.** Emerging evidence of epigenetic modifications in vascular complication of diabetes. **Frontiers in endocrinology.** 2017 Sept 29; 8: 237.

4. Bhawna Rastogi, Amit Kumar, **Satish K. Raut**, Naresh K. Panda, Vidya Rattan, Nainesh Joshi and Madhu Khullar*. Downregulation of miR-377 Promotes Oral Squamous Cell Carcinoma Growth and Migration by Targeting HDAC9. **Cancer Invest.** 2017 Mar 16; 35(3):152-162**.**

5. **Satish K Raut**, Gurinder B Singh, Bhawna Rastogi, Akhilesh Kumar, Anupam Mittal, Ajay Bahl, Nilambra Dogra, Sandeep Singh and Madhu Khullar. miR-181a and miR-30c synergistically modulate p53-p21 pathway in diabetes induced cardiac hypertrophy. **Mol Cell Biochem**. 2016 Jun;417(1-2):191-203.

6. **Raut SK**, Kumar A, Singh GB, Nahar U, Sharma V, Mittal A, Sharma R, Khullar M. miR-30c mediates up regulation of Cdc42 and Pak1 in diabetic cardiomyopathy. **Cardiovasc Ther.** 2015 Jun;33(3):89-97.

7. Bhawna Rastogi, **Satish K Raut**, Naresh K Panda, Vidya Rattan, Bishan D Radotra, and Madhu Khullar. Overexpression of HDAC9 promotes oral squamous cell carcinoma growth, regulates cell cycle progression, and inhibits apoptosis. **Mol Cell Biochem.** 2016 Apr;415(1-2):183-96.

8. Gurinder Bir Singh, **Satish K. Raut**, Sanskriti Khanna, Akhilesh Kumar, Rajni Sharma, Uma Nahar Saikia, Madhu Khullar. MicroRNA-200c modulates DUSP-1 expression in diabetes induced cardiac hypertrophy. **Mol Cell Biochem,** 424 (1-2), 1-11. 2016 Sep 30.

9. Singh GB, Khanna S, **Raut SK**, Sharma S, Sharma R, Khullar M. DUSP-1 gene expression is not regulated by promoter methylation in diabetes-associated cardiac hypertrophy. **Ther Adv Cardiovasc Dis.** 2017 Apr 1:11(5-6) 47-154.

10. **Satish K Raut,** Akhilesh Kumar, Madhu Khullar. Epigenetic role of microRNAs in diabetic cardiomyopathy. **journal of practice of cardiovascular sciences**, 2 (2), 79, 2016.

11. Baviskar AT, Banerjee UC, Gupta M, Singh R, Kumar S, Gupta MK, Kumar S, **Raut SK**, Khullar M, Singh S, Kumar R. Synthesis of imine-pyrazolopyrimidinones and their mechanistic interventions on anticancer activity. **Bioorg Med Chem.** 2013 Sep 15; 21(18):5782-93.

12. Shailesh Pawar, Alok Chakrabarti, Sarah Cherian, Satish Pande, Madhuri Nanaware, **Satish Raut**, Biswajoy Pal, Santosh Jadhav, Sadhana Kode, Santosh Koratkar, Vishal Thite, Akhilesh Mishra*. An Avian Influenza A (H11N1) virus from a wild aquatic bird revealing a unique Eurasian-American genetic reassortment. **Virus Genes**. 2010 Aug; 41(1):14-22.

13. Alok KC, Shailesh DP, Sarah SC, Santosh SK, Santosh MJ, Biswajoy P, **Satish R**, Vishal T, Sadhana SK, Sachin SK, Bestin JP, Jayati M, Akhilesh CM*. Characterization of the Influenza A H5N1 Viruses of the 2008-09 Outbreaks in India reveals a third introduction and possible endemicity. **PLoS One.** 2009 Nov 16;4(11):e7846.

14. Akhilesh CM*, Sarah SC, Alok KC, Shailesh DP, Santosh MJ, Biswajoy P, **Satish R**, Santosh K, Sadhana SK. A unique influenza A (H5N1) virus causing a focal poultry outbreak *in 2007 in Manipur, India. **Virol J.** 2009 Feb 24; 6:26*.

15. Shailesh P*, Satish P, Aniruddha J, Santosh K, Biswajoy P, **Satish R**, Madhuri N, Koninika R, Alok C, Sadhana Kode1, Vishal T, Madhukar K, Satish R, Atanu B, Amit P, Aditya P, Pranav P, Pramod D. Avian influenza surveillance in wild migratory, resident, domestic birds and in poultry in Maharashtra and Manipur, India, during avian migratory season 2006–07. **CURRENT SCIENCE** 2009; 97(4):550-554.

16. Madhu Khullar and **Satish K Raut**. Gut microbes and heart diseases. Matters of the Heart, Volume 2; No.2 July 2018.

17. Khullar M, Kumar A, **Raut SK**, Singh GB, Sharma V, Mittal A, Kumar A, Sharma R, Nahar U, Ola RP. Role of micro-RNAs in pathophysiology of diabetic cardiomyopathy. GEO accession no: GSE44179.

18. Madhu Khullar, **Satish K. Raut***. Oxidative Stress in Metabolic Diseases: New insight. **Frontiers in Bioscience-Landmark** (Under review 2021)

PUBLICATIONS: ABSTRACTS

1. **SK Raut,** A Kumar, GB Singh, R Sharma, U Saikia, M Khullar. MicroRNA-30c Modulates Diabetes-Induced Cardiac Hypertrophy via PI3K/Akt Signaling Pathway. **Circulation Research** 111 (Suppl 1), A17-A17.

2. A Kumar, **SK Raut,** UN Saikia, R Sharma, M Khullar. Microrna-21 Contributes to Diabetic Cardiomyopathy Associated Cardiac Fibrosis. **Circulation** 124 (Suppl 21), A15227-A15227.

3. M Khullar, A Kumar, **SK Raut**, G Singh, V Sharma, U Saikia. Mir-21 Regulates Cardiac Fibrosis Via Akt/pkb Pathway In Diabetic Cardiomyopathy. Journal Of Diabetes 5, 194-195

4. M Khullar, AK Kumar, A Mittal, R Sharma, **S Raut**, GB Singh, U Nahar. Microrna-21 Plays A Role In Diabetes Induced Myocardial Disease. Journal Of Diabetes 3, 181.

REVIEWER (INTERNATIONAL PEER REVIEWED JOURNALS):

- Frontiers in Genetics (Frontiers Media SA)
- Theranostics
- Frontiers in Cardiovascular Medicine
- Front. Endocrinol. - Diabetes Molecular Mechanisms
- Front. Pharmacol. - Cardiovascular and Smooth Muscle Pharmacology

TRAININGS /WORKSHOPS/ SEMINARS/ CONFERENCES:

1. Actively participated in Faculty Development Program on "Research Methodology", "Research in Robotics and Automation", "Lab on Chip", "Computer Science & Biology"" Transgenics", and "Drug Engineering" conducted by AICTE Training And Learning (ATAL) Academy.
2. Participated in the International Conference on Recent Advancement in Science and Technology, Organised by the Glocal University, Saharanpur, UP, 11th -12th November 2020.
3. Completed 2-weeks comprehensive online Patent information certificate course organised by Turnip Innovations, 8th November-22nd November 2020.

4. Poster presentation in Basic Cardiovascular Sciences 2012 Scientific Sessions: Frontiers in Cardiovascular Science and Novel Therapy- July 23–26, 2012 New Orleans, Louisiana, USA.
5. Poster presentation in Cardiovascular Research Convergence- Feb 17-18, 2012, AIIMS, and New Delhi.
6. Oral presentation in ISHRCON-2014, February 3-4, 2014, NIPER- Mohali, Punjab, entitled "microRNA-30c plays a role in diabetes induced cardiac hypertrophy by modulating expression of Cdc42 & Pak1 in gene".
7. Trained to work in BSL3+ Laboratory at National Institute of Virology from 22nd to 23rd February 2007.
8. Trained at Applied Biosystems authorized training facility on applications of **Real time PCR** from 27th to 28th September 2007.
9. Trained to validate and QA/QC of COVID-19 kits in PGIMER Chandigarh from 01/07/2020 to 14/08/2020
10. Attended workshop organized by NIV-ICMR-CDC-HHS-USA on Real-Time PCR for detection of Human and Avian Influenza viruses October, 8-12, 2007.

EVENTS ORGANIZED/COORDINATED:

1. Organizing member of an international conference ICHF 2015 at PGIMER Chandigarh.
2. Organizing member of an international conference ICCR 2013 at PGIMER Chandigarh.
3. Organizing member of an international conference WHFC 2009 at PGIMER Chandigarh.