Faculty Profile

Name :	**Dr. Palmi Modi** (Assistant Professor, LJIP)
Date of Birth :	**23/06/1990**
Educational Qualifications:	
-Ph.D. (University)	**Ph.D. in Pharmacy, Dharamsinh Desai University (2013-2019)**
-Master's (University)	**M.Pharm. in Mdicinal Chemistry, Gujarat Technological University (2011-2013)**
-Bachelor's(University)	**B.Pharm., Saurashtra Univesity (2007-2011)**
-Any Other:	**------**
Area of Specialization :	**Pharmacy, Pharmaceutical Chemistry, Organic Chemistry, Medicinal Chemistry**
Date of Joining (LJIP)	**15/06/2017**
Present Position :	**Assistant Professor of Department of Pharmaceutical Chemistry, L.J. Institute of Pharmacy**
Contact Details:	
-Address :	**2-GF, Shantinath Appartment, B/H Doctor House, Ellisbridge, Ahmedabad-380 009, Gujarat, India**
-Email	**Palmi.modi_ljip@ljinstitutes.edu.in , palmipendal@gmail.com**
-Phone	**(R)** 079-26427145 **(M)** 9909824916
Work Experience :	Teaching **(7 years)** Industrial(--) Research& Development(--)
Subjects taught :	
-Under Graduate level	**Inorgnic Chemistry (1st sem.), Organic Chemistry (2nd, 3rd and 4th sem), Medicinal Chemistry (4th, 5th and 6th Sem.)**
-Post Graduate level	**_____**
Area of Specialization in your field	**Drug design and discovery**
A brief account of work done by you in the M. Pharm. and Ph.D.	**M.Pharm:** ***"Design, Synthesis and Biological Screening of New pyridazine Derivatives as an Anti-inflammatory Agents"*** Inflammation disease is estimated to reach 210 million by the year 2010 and 300 million by the year 2025. Varieties of new pharmacological interventions are developed in last several years. Several studies has been carried out covering different aspects of pharmacological interventions (new and old drugs) along with the effects. We synthesise the series of Pyridazine derivatives which may be useful in the future as anti-inflammatory agents. Diaryl pyridazine has not been investigated as anti-inflammatory agents till now. So pyridazine is selected as the core structure in our original design. We designed diaryl pyridazine derivatives by taking Celecoxib as parent nucleus as drugs of this class. When indirect type of molecular modeling was carried out to find structure similarities of diaryl pyridazine with Celecoxib, it shows RMSD value 0.32 showing that both the structures are superimposing on each other. So we made hypothesis that diaryl pyridazine may exert potential anti-inflammatory activity. So we planned to synthesize and screen derivatives of diaryl pyridazine as anti-inflammatory agents based on structure similarity. Further Structural elucidation of synthesized molecules was performed through IR, MASS, ^{1}H-NMR and ^{13}C-

	NMR spectroscopy. Synthesized molecules were screened for their anti-inflammatory activity with rat paw edema method. Ulcerogenic potential was also measured. **Ph.D.** ***"Molecular Modelling Studies, Synthesis and Biological Evaluation of some Novel Pyrazole Derivatives as Anti-tubercular Agents"*** Tuberculosis (TB) is an infectious airborne disease caused by different species of *Mycobacterium tuberculosis* (Mtb) and it is one of the greatest world's health hitches with gradually increase in the mortality and morbidity. Though effective chemotherapy has been place over 50 years, World Health Organisation has declared tuberculosis "a global health emergency" which is the leading cause of death. Worldwide, TB is one of the top 10 causes of death from a single infectious agent. Each year millions of people continue to fall sick with TB. In 2017, TB caused an estimated 1.3 million deaths among HIV-negative people and there were an additional 300 000 deaths from TB among HIV-positive people. Currently, resistance of *Mycobacterium tuberculosis* strains towards the main drugs isoniazide (INH) and rifampicin is of significant concern. Development of drug resistance has narrowed down the conventional anti-tuberculosis therapeutic regimen. There is an urgent need of new therapeutic agents which acting through different mechanism of action. Mycolic acids, with 60-90 carbons long chain α-alkyl β-hydroxyl fatty acids is the key constituents for the Mtb cell wall biosynthesis. Pathogenicity of Mtb is linked to its peculiar nature of cell envelope that possesses two fatty acid synthase (FAS) pathways, FAS-I and FAS-II involved in the synthesis of mycolic acid. As there are limited numbers of inhibitors available for treating tuberculosis, there is a crucial requirement to develop medicinally useful enoyl acyl carrier protein reductase (InhA) inhibitors. So, it is a target of choice for the discovery of newer anti-tubercular agents. Based on ligand based and structure based strategy Series of 5-amino-N-substituted phenyl-3-(substituted phenylamino)-1H-pyrazole-4-carboxamide (PM) and 7-hydroxy-5-methyl-N-substitutedphenyl-2-(substituted phenylamino)pyrazolo[1,5-*a*]pyrimidine-3-carboxamide (LMPM) derivatives were designed and synthesized. Structural elucidation of synthesized molecules was performed through IR, MASS, ^{1}H-NMR and ^{13}C-NMR spectroscopy. Synthesized molecules were screened for their anti-mycobacterial activity against H_{37}Rv stain by Microplate Alamar Blue Assay (MABA) Method. Further QSAR study was carried out to get the better understanding of structure activity relationship.
New Technologies /methods developed by you	-----
Scale up and Technology Transfer	-----
Industrial Projects Carried Out :(No.)	___
Revenue/Royalty earned by the Organization in Indian Rupees	-----
No. Government funded Projects undertaken by you and their total value	-----
Research Guidance :	
-Master's	-----
-Guide for PhD	-----

Summer/Winter/School/Conference/ Workshops attended:	**18**
Summer/Winter/School/Conference/ Workshops Conducted:	**00**
Patents taken/applied for:	**-----**

Publications: No of books: ***NA***

Research Papers : ***07*** **(7 in International Journals-, Elsevier- 04, Bentham -01, Tylor and francis- 02)**

Some of the notable papers are mentioned below:

1. **Life Sciences** 2020
   In silico studies on therapeutic agents for COVID-19: Drug repurposing approach
   https://www.sciencedirect.com/science/article/pii/S0024320520304008

2. **Journal of Biomolecular Structure and Dynamics** 2020
   Pharmacophore-based virtual screening, 3D-QSAR, molecular docking approach for identification of potential Dipeptidyl peptidase IV inhibitors
   https://www.tandfonline.com/doi/abs/10.1080/07391102.2020.1750485

3. **Bioorganic Chemistry** 2019
   Structure-based design, synthesis and biological evaluation of a newer series of pyrazolo [1, 5-a] pyrimidine analogues as potential anti-tubercular agents
   https://www.sciencedirect.com/science/article/abs/pii/S0045206818314019

4. **Journal of Biomolecular Structure and Dynamics** 2019
   Identification of some novel pyrazolo[1,5-a]pyrimidine derivatives as InhA inhibitors through pharmacophore-based virtual screening and molecular docking
   https://www.tandfonline.com/doi/abs/10.1080/07391102.2018.1465852

5. **Bioorganic Chemistry** 2018
   Structure-based design, synthesis and evaluation of 2, 4-diaminopyrimidine derivatives as novel caspase-1 inhibitors
   https://www.sciencedirect.com/science/article/abs/pii/S0045206817309148

6. **Journal of Molecular Graphics and Modelling** 2018
   Rational approach to identify newer caspase-1 inhibitors using pharmacophore based virtual screening, docking and molecular dynamic simulation studies
   https://www.sciencedirect.com/science/article/abs/pii/S1093326317307830

7. **Current topics in medicinal chemistry** 2016
   Thiazole: a review on chemistry, synthesis and therapeutic importance of its derivatives
   https://www.ingentaconnect.com/content/ben/ctmc/2016/00000016/00000026/art00003

Conferences ,Workshops and Seminars

1. Attended 15 days Faculty development Program entitled “Emerging trends in Pharmaceutical Sciences : From research to Revenue”, 20th January -1st February, 2020 held at L. M. College of Pharmacy, Ahmedabad.
2. **Poster presented** in international conference entitled “4th Info-carribbean Conference” DDU, Nadiad 2017

3. Attended 3 days Faculty development Program entitled "Intellectual property Rights", 21st October -23rd October, 2019 held at Gujarat Technological University, Ahmedabad.
4. Attended Woman Development Seminar entitled "Woman-undauted" held at L. M. College of Pharmacy, Ahmedabad on 8th march 2019.
5. Attended Woman Development Seminar entitled "Cheminformatics in Organic & Pharmaceutical Chemistry" held at L. M. College of Pharmacy, Ahmedabad on 15th December 2016.
6. Attended National Seminar and workshop entitled "Hands-on training on Computational Methods in Drug Discovery by Schrodinger" held at L. M. College of Pharmacy, Ahmedabad on 23rd and 24th June 2016.
7. Attended National Seminar and workshop entitled "New Horizone in Drug Design" held at L. M. College of Pharmacy, Ahmedabad on 1st -3rd March, 2015.
8. **Poster Presentation and won IIIrd Prize** on national seminar entitled "National Seminar on Green Chemistry" organized by Gujarat Forensic Science, 2015.
9. Presented poster in international conference entitled "Lipophagy Inducers: Novel target to enhance the lipolysis" on Nipicon 2014 held at Nirma University, 2014.
10. Attended as delegate in one day seminar entitled "Woman in Science" held at held at L. M. College of Pharmacy, Ahmedabad on 8th march 2014.
11. Presented Poster on international symposium entitled "Recent Trends in Cancer Research: From OM to OMICS" held by The Gujarat Cancer & Research Institute, Ahmedabad on 24th November 2014.
12. Presented Poster on international symposium entitled "Drug development for Orphan/Neglected Diseases" held by CSIR-Central Drug Research Institute, Lucknow on 26th -28th February 2013.

Notable Achievements and activity excuted:

Association with Professional Bodies	-----
Grants Received/Fetched:	-----
Consultancy and Expertise available for industries	-----