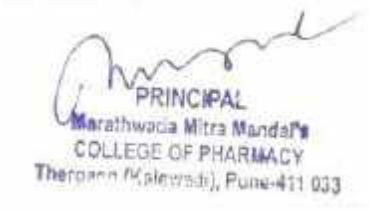
6.5.3

Collabrative Quality Initiatives with other Institutions

- **M.Pharm Dissertation Research Projects**
- **Collabrative research by faculty resulting in publications**
- **Faculty Training, Conferences, FDP, Seminars**
- **Student Training**



MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY,

THERGAON, PUNE-411 033 (M.S)

2019-2020

MARATHWADA MITRA MANDAL'S
COLLEGE OF PHARMACY
(D. Pharm., B. Pharm., M. Pharm., Ph.D.)
Approved by AICTE & PCI, New Delhi
Recognized by Govt. of Maharashtra, DTE (MS)
Affiliated to Savitribai Phule Pune University, Pune (Permanently Affiliated – B. Pharm.)
& Maharashtra State Board of Technical Education, Mumbai
Recognized Under Section 2 (f) and 12 (B) of the UGC Act, 1956

MMCOP
Bestowing Health & Happiness

Shri. Shivajirao D. Ganage President | **Prin. Bhausaheb G. Jadhav** Exec. President | **Shri. Kishor H. Mungale** Secretary

B. Pharm. Accredited by National Board of Accreditation (NBA)

Ref: MM / COP/SS/2019/153 *Date:* 01/06/2019

To,
Dr. Snehal More
Scientist, CSIR-National Chemical Laboratory,
Dr. Homi Bhabha Road ,
Pune- 411 008, India

Subject-: No Objection Certificate for M. Pharm Dissertation Work

Respected Sir/Madam,

Marathwada Mitra Mandal, Pune is a Public Charitable Trust established in 1967. The Trust has an excellent record of running the Technical, Professional and Vocational courses at its various educational complexes at Deccan Gymkhana, Karvenagar, Thergaon and Lohgaon, Pune.

Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-33, was established in the year 2006. At present college run D. Pharm, B. Pharm, M. Pharm courses and Ph.D. in Pharmaceutical Sciences. The college is progressive, student centered, and committed to high quality education and for creating excellent teaching learning facilities. For M. Pharm Sem-III & IV, the student has to carry out dissertation work. The dissertation work may be carried out either in Industry or at Research Centre.

In this regard, the college has No Objection to carry out M. Pharm Dissertation Work of the following student in your esteemed organization. However due to change in syllabus by Pharmacy Council of India, student has to attend the Research Methodology course lectures at Institute on every Friday & Saturday till the University Examination for the subject Research Methodology is over (i.e. only for Sem-III), In the Semester-IV, the student can attend the Industry/ Research Organization for all days of work.

Sr. No.	Name of the Student	Branch	Name of the Institute Guide
1	Ms. Prachi Bhaskar Dighe	M. Pharm in Pharmacognosy	Mr. Prasad V. Kadam

The project for dissertation may be done on any topic of interest of the industry. The student will have two guides for his /her projects work i.e. one from industry as a co-guide and from the institution. The student will also report his work progress once in a week to institution.

In this regard we are looking forward to have your co-operation.

Thanking you,

Yours Faithfully,

Dr. Rahul H. Khiste
Dean, Training, Placement, III & E.D. Cell

Dr. Manohar J. Patil
Principal
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Estd. 2006

---------- building Pharmacy Professionals through Education par Excellence

S. No. 4/17, Sector No. 34, PCNTDA, Off Kalewadi Phata Pimpri Road, Thergaon, Pune – 411 033 (MS)
Ph. No. 8446060841, E – mail : mmcopharm@yahoo.co.in Website : www.mmcop.edu.in

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

NATIONAL CHEMICAL LABORATORY
PUNE-411008

I 1. Dighe Prachi Bhaskar am a student/employee
Name of the Trainee
representative of Marathwada Mitra Mandal's College of
Name and address of the organization
Pharmacy, Thergaon, (Kalewadi), Pune
My permanent address is At Hanmantgaon Bol-Pathare
Tal- Rahata Dist- Ahmednagar.

2. National Chemical Laboratory
Name of the organization
National Chemical Laboratory, Pune has agreed to provide me training from / /2019
to / /2020 in Department of Biochemical Division
give details of training
During this period I shall be working under the supervision of Dr. Snehal Y. More Madam
Scientist/(s) from 9.00 a.m. to 5.30 p.m

3. I hereby agree to abide by the rules and regulations of NCL and will observe punctuality and discipline during the period of my training.

4. I/~~My organization~~ will meet any expenses (in advance) that may have to be borne if any special raw material/apparatus has to be procured for my training.

5. I/~~My organization~~ undertake to compensate NCL for any loss/ damage that may be caused by me

6. NCL shall not be in anyway responsible and will not be liable to pay compensation for any accident that may lead to injury/ death during my training period.

7. I hereby agree to execute a bond to complete the work before I submit my report/ thesis to the college/university as the college/university norms. I agree that the technology development by me at NCL will be the property of NCL.

Signature of the trainee

Date 05/06/2019
Place Thergaon, Pune

Attested by Head of the
College/Institute/Organization
PRINCIPAL
Seal Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

CONFIDENTIALTY & IP AGREEMENT

Standard format, Form IP/TR-1

Home Institution (if applicable) of Transient Researcher takes note of this and agrees:

Home Institution: Marathwada Mitra Mandal's College of Pharmacy, Pune

Date: 17/06/2019

Signature:

Name: Pradu Bhaskar Digle

Position: Research Trainee

Notes and instructions:

1. "Transient Researcher" includes
   a. Undergraduate & post graduate trainees, visiting or exchange students, visiting PhD students, post doctoral researchers, visiting scientists and company/contract personnel providing services within CSIR/NCL.
   b. Project staff, PhD students/research fellows.
2. All Transient researchers are to execute this agreement, get signature of authorized signatory at his/her Home Institution and submit to their hosts/ mentors at CSIR/NCL. The hosts/mentors should forward the same to Dr NS Tewari, IP Group, A207, PAML, NCL.
3. Exceptions and deviations (if required/any) to this agreement may be referred to the IP Group.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

CONFIDENTIALTY & IP AGREEMENT

Standard format, Form IP/TR-1

This Confidentiality and Intellectual Property Agreement is made and entered into on 17th day of June, Two Thousand Nineteen ('Effective Date') between Council of Scientific & Industrial Research (CSIR), a Society registered under the Societies Registration Act (XXI of 1860), having its registered office at Anusandhan Bhavan, 2, Rafi Marg, New Delhi –110001 acting through its constituent National Chemical Laboratory (CSIR/NCL), located at Dr. Homi Bhabha Road ,Pune-411008, and

Dr/Mr./Ms Prachi Dighe (hereafter referred as "Transient Researcher" permanently residing at _____; who may have access to CSIR/NCL information that includes, but not limited to, data, samples, prototypes, specifications, software, processes, lab facilities, databases, and CSIR/NCL clients.

Agreement reference (to be filled by IP Group)			
IF no. in NCL			
Name of the "Transient Researcher"	Prachi Bhaskar Dighe		
Father's name	Bhaskar Vishnu Dighe		
Permanent contact information of "Transient Researcher"	At Hammadgaon Post Pathar Tal Rahata Dist A Nagar Email id - prachiedighe@gmail.com		
Current contact information of "Transient Researcher"	Contact No. - 7040596033 Kalewadi, Pune		
Period of visit at CSIR/NCL from	June 2019	to	Feb-2020
During the period of visit, the Transient Researcher is employed by / associated to other Institutions (Home Institution)	Yes ☑ No ☐ (Please check one)		
Name and Address of the Home Institution	Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune		
Hosting division/unit at CSIR/NCL	Biochemical Division		
Host/ mentor at CSIR/NCL and contact info	Dr. Snehal. V. More Contact - sv.more@ncl.res.in		

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

CONFIDENTIALTY & IP AGREEMENT

Standard format, Form IP/TR-1

Project topic	Formulation & Development Herbal Cosmeceuticals

During the period of visit, Transient Researcher may be involved in research activities of CSIR/NCL. In consideration of the participation in projects administered by CSIR/NCL, access to or use of facilities provided by CSIR/NCL and/or other confidential internal information it is hereby agreed as follows:

1. The Transient Researcher will disclose to the Hosting Division/Unit all his/her patentable inventions conceived or first reduced to practice in whole or in part in the course of his/her research activities at CSIR/NCL.
2. The Transient Researcher and his/her Home Institution will hold in strict confidence confidential information that the Transient Researcher gains access to during his/her stay at CSIR/NCL and will not make use of such confidential information other than for his/her research activities at CSIR/NCL. The obligation shall remain effective until three (3) years from termination of the visit. Publication of research results or any documents or information that is confidential needs written consent of CSIR/NCL in advance.
3. CSIR/NCL shall solely own all rights of the intellectual property generated during the visit.
4. In the event that research activities are subject to contractual obligations of CSIR/NCL with a third party, right, title and interest in any and all results (including but not limited to know-how, patentable inventions, copyrights, data etc.) shall be owned by CSIR/NCL only. In such an event, the Transient Researcher will assign to CSIR/NCL all his/her rights, title and interests to all such results and will execute and deliver all documents and do any and all things necessary and proper to effect such assignment.
5. The Transient Researcher shall maintain adequate and current written records of all inventions and creative works made by him/her (in the form of notes, sketches, drawings and as may be specified by CSIR/NCL), which records shall be available to and remain the sole property of the CSIR/NCL at all times. The transient researcher agrees that no claim can be made on the ownership of these records by him/her or by his/her representative during the course of assignment or in future.
6. The Transient Researcher recognizes and agrees that CSIR-NCL may suffer immediate and irreparable harm to its goodwill and business which will not be compensable by damages alone in the event that Transient Researcher breaches or threatens to breach its obligations hereunder in any material respect. Accordingly, in the event of any such breach or threatened breach, in addition and not in limitation of any other rights, remedies or damages available to CSIR-NCL, CSIR-NCL shall be entitled to obtain a temporary, preliminary and/or permanent injunction in order to prevent or restrain any such breach by Transient Researcher or by any his/her agent, representative.
7. This Agreement constitutes no employment contract with CSIR/NCL.
8. The Agreement shall become effective by the signature of the contracting parties.
9. The disputes if any arising in context to this Agreement shall be resolved as per the Arbitration and Conciliation Act, 1996.The place of arbitration shall be at Mumbai and be conducted in English language

Host/ mentor at CSIR/NCL

Date 17/06/2019

Signature:

Name: DR. SNEHAL MORE

Transient Researcher

Date: 17/06/2019

Signature: Digha

Name: Pradip Bhaskar Digha

Maratwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-33 Estd. 2006

PRINCIPAL
Maratwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Taylor & Francis
Taylor & Francis Group

ISSN Print: 2229-7928
ISSN Online: 2230-7532

A State-of-the-art Review on Applications of Different Analytical Techniques for Some ACE Inhibitors

Sandip D. Firke [1], Komal R. Bhoi [1], Kiran R. Patil [1], Shubham D. Jayswal [1], Avinash R. Tekade [2], Shailesh S. Chalikwar [1]*

[1] Department of Pharmaceutical Quality Assurance and Pharmaceutical Chemistry, R. C. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dist. Dhule 425 405 (MS), India

[2] Department of Pharmaceutics, Marathwada Mitramandal's College of Pharmacy, Thergaon, Pune 411 033 (MS), India

Received 12 August 2019; accepted in revised form 08 January 2020

Abstract: Angiotensin converting enzyme inhibitors are being used for controlling acute and chronic high blood pressure which inhibits the angiotensin converting enzyme. The pharmaceutical analysis of drugs requires effective and efficient analytical methods for quality control, as well as pharmacodynamic and pharmacokinetic studies. In this review article, an extensive survey in analytical chemistry journals had been conducted and varied analytical methods developed so far and used for the estimation of some ACE inhibitors in bulk drugs, formulations, and biological fluids have been reviewed. This review covers over sixty reported analytical methods which embrace capillary electrophoresis, conductometry, HPLC, HPTLC, and electrochemical methods. Bestowed applications concern analysis of ACE inhibitors a single component or in multi-component from pharmaceutical formulations and biological samples. The article will help analysts while selecting the crucial parameters in the development of new method for the estimation of ACE inhibitors.

Key word: ACE inhibitors; capillary electrophoresis; electrochemical analyser; LC-MS; HPLC; HPTLC.

Introduction

Conjointly known as high blood pressure (HBP), hypertension (HTN) is a condition in which the blood force against the artery walls is too big. In the United States, some 85 million people have high blood pressure. It is estimated that unregulated HTN is responsible for 7.5 million deaths per year worldwide [1] and accounts for more than $47 billion spent on health care services, medications and the absent population in the United States alone [2]. It is expected that 1.56 billion people are to suffer from HTN by 2025. Different sporadic controlled trials have incontrovertible findings that suggest that even minor blood pressure decreases like 10 mm of Hg reduces patients risk of death from cardiovascular disease by 25 % and similarly decreases the risk of stroke-related mortality by 40 %[3], demonstrating the urgent need for new therapies in the treatment of this disease.

Angiotensin converting enzyme inhibitors (ACE inhibitors) are medications that slow (inhibit) the activity of the enzyme ACE, which decreases the production of angiotensin II (Fig. 1). As a result, blood vessels enlarge or dilate, and blood pressure is reduced. This lower blood pres-

*Corresponding author (Shailesh S. Chalikwar)
E-mail: < pharmashailesh@rediffmail.com >

Research Journal of Pharmacy and Technology
Year : 2020, Volume : 13, Issue : 3
First page : (1236) Last page : (1242)
Print ISSN : 0974-3618. Online ISSN : 0974-360X.
Article DOI : 10.5958/0974-360X.2020.00228.0 (http://dx.doi.org/10.5958/0974-360X.2020.00228.0)

Development and Validation of Novel Analytical Method for Empagliflozin and Metformin Hydrochloride in Bulk and Pharmaceutical Dosage Form by Four Different Simultaneous Estimation Approaches using UV Spectroscopy

Munde Manojkumar K.[1,2,*], Kulkarni Nilesh S.[2], Khiste Rahul H.[3], Sen Dhanya B.[1]

[1]Department of Pharmacy, Sumandeep Vidyapeeth Deemed to be University, Piparia, Vadodara-391760, Gujarat, India.

[2]PES Modern College of Pharmacy (for Ladies), Moshi, Maharashtra, Pune, India. Affiliated to Savitribai Phule Pune University, Pune

[3]Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-411033, Maharashtra, India. Affiliated to Savitribai Phule Pur University, Pune.

*Corresponding Author E-mail: manojpcist@gmail.com (mailto:manojpcist@gmail.com?cc=gbehal@indianjournals.com)

Online published on 22 April, 2020.

Abstract

Four new UV spectrophotometric methods namely simultaneous equation, absorbance ratio, area under curve and first derivative (zero crossing) spectroscopic methods were developed and validated for simultaneous estimation Empagliflozin and Metformin hydrochloride in bulk and tablet formulation. In simultaneous equation method, absorbance was measured at 224 and 232 nm for both the drugs. Empagliflozin and Metformin hydrochloride was estimated using 224 and 232 nm in absorbance ratio method. In Area under curve method both drugs were estimated at 224 and 232 nm respectively. First derivative (zero crossing) method was based on the transformation of UV spectra in to first derivative spectra followed by measurement of first derivative signal at 224 a 232 nm for Empagliflozin and Metformin hydrochloride, respectively using 2 nm as wavelength interval (Δλ) and 1 as scaling factc Methods were found to be simple, fast, highly sensitive, cost effective and hence can be useful for simultaneous estimation of Empagliflozin and Metformin hydrochloride in commercial tablet formulation for routine quality control analysis.

Keywords

Simultaneous equation, absorbance ratio, area under curve method, first derivative (zero crossing) spectroscopic methods, tablet formulation.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ISSN 2581 – 4303

Available Online at www.ijpba.info
International Journal of Pharmaceutical & Biological Archives 2019; 10(3):202-206

RESEARCH ARTICLE

Simultaneous Equation and Area Under the Curve Spectrophotometric Methods for Estimation of Ranolazine Hydrochloride Presence of its Base-induced Degradation Product: A Comparative Study

Rahul H. Khiste[1]*, Aishwarya S. Ambekar[1], Nilesh S. Kulkarni[2]

[1]Department of Quality Assurance Technique, Marathwada Mitra Mandal's College of Pharmacy (Affiliated to Savitribai Phule Pune University), Pune, Maharashtra, India, [2]Department of Pharmaceutics, PES Modern College of Pharmacy (For Ladies) (Affiliated to Savitribai Phule Pune University), Pune, Maharashtra, India

Received on: 20 April 2019; Revised on: 25 May 2019; Accepted on: 12 June 2019

ABSTRACT

Two simple spectrophotometric methods were developed and validated for the determination of ranolazine hydrochloride in the presence of its base-induced degradation product, namely simultaneous equation method using two wavelengths of 272 and 249 nm method (A) and area under the curve method using two wavelength ranges of 267–277 nm and 244–254 nm method (B). The accuracy, precision, and linearity ranges of the planned methods were firm. The methods were validated and the specificity was assessed by analyzing synthetic mixtures containing the drug and it's degradant. The two methods were useful for the determination of the cited drug in its pharmaceutical preparation and the obtained results were statistically compared with those of a reported method. The comparison shows that there is no important difference between the proposed methods and the reported method about both accuracy and precision.

Keywords: Base degradation, ranolazine hydrochloride, spectrophotometric methods

INTRODUCTION

Ranolazine hydrochloride (RS)–N-(2,6-dimethylphenyl)-2-[4-[2-hydroxy-3-(2-methoxyphenoxy)-propyl]piperazin-1-yl] acetamide [Figure 1] is an antianginal class. Ranolazine HCl is available as tablet dosage form 1 to 2. Ranolazine is not official in pharmacopoeia. A few methods in literature were reported for the determination of ranolazine HCl by ultraviolet (UV)-visible spectroscopy, high-performance liquid chromatography (HPLC), and high-performance thin-layer chromatography method.[1-3] Although these techniques are sufficiently sensitive, they use expensive instrument and time consuming. The present UV method is a simple method and does not include complicated solvent system development as required for liquid chromatography.[4,5] Therefore, this study aimed to develop and validate simple, rapid, accurate and specific, fast, low cost, and selective methods for routine quality control analysis of pharmaceutical product containing ranolazine HCl. UV spectrophotometry is an easy to use and robust method for the quantification of drugs in formulation when there is no interference from excipients.[6]

Experimental

Instruments

SHIMADZU UV-1800 PC dual-beam UV-visible spectrophotometer was used.

Software

UV-Probe personal spectroscopy software version 2.1 (SHIMADZU) was used.

*Corresponding Author:
Dr. Rahul H. Khiste,
E. mail: rahulkhiste@yahoo.com

Original Article

Development of Validated Stability-indicating RP-HPLC Method for Determination of Novel Directly Acting Antiviral agent and Characterization of its Degradants by LC–ESI–MS

Babita Agarwal[1,*], Santosh Gandhi[2]

[1]Department of Pharmaceutical Chemistry, Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra, INDIA.
[2]Department of Pharmaceutical Chemistry, AISSMS College of Pharmacy, Shivaji Nagar, Pune, Maharashtra, INDIA.

ABSTRACT

Aim: The current study was performed to develop and validate stability indicating high performance liquid chromatography method (RP-HPLC) for determination of ledipasvir (LPR); to identify and characterize its major degradants by liquid chromatographic–tandem mass spectrometric method (LC-ESI-MS). **Materials and Methods:** The method was developed using reverse phase gradient elution and validated for standard ICH parameters. The optimized mobile phase comprised of acetonitrile:water with 0.2 % formic acid (70:30% v/v) at 1 ml/min flow rate with satisfactory retention time (tR), theoretical plates and good resolution of LPR and its degradants. Further, forced degradation under acid, base, thermal, photolytic and oxidative stress conditions was studied as per ICH guidelines. LC-ESI-MS with time of flight analyser was used to characterize the degradants. The degradation pathways for major degradants were proposed. **Results:** The developed method had retention time of 6 mins. The RSD for system was found to be less than 2% whereas mean recovery was obtained 97.2 – 102.5%. Linearity range of 5-30 µg/ml with 0.998 regression coefficient (R^2) was observed. Detection and quantification limits were obtained as 0.010 µg/mL and 0.032 µg/mL, respectively. LPR was stable in photolytic and thermal environments whereas degraded in acid, base and oxidative states. LC–ESI–MS was used effectively for characterization and structural elucidation of degradants. **Conclusion:** The results indicated that validated RP-HPLC technique can be employed for routine analysis of LPR in bulk and dosage formulas and also would be capable of separating degradants from analyte peak.

Key words: RP-HPLC, LC-ESI-MS, Ledipasvir, Stability indicating ICH method, Validation, Degradation pathway.

Submission Date: 19-12-2019;
Revision Date: 14-04-2020;
Accepted Date: 02-10-2020

DOI: 10.5530/ijper.54.4.212

Correspondence:
Mrs. Babita Agarwal
Department of Pharmaceutical Chemistry, Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra, INDIA.
Phone: +91 9822544505
E-mail: babita_a_agarwal@yahoo.co.in

INTRODUCTION

Viral hepatitis has become a serious public health concern as it affects more than 3% of world population. Out of this more than 1% of the population is infected by hepatitis C virus (HCV).[1,2] The prevalence of HCV infection doubled between 2010-2014 and till date. Annually almost 1.75 million infections are reported worldwide for HCV infection.[3] If HCV infection remains untreated; can progress to cirrhosis, fibrosis and hepatocellular carcinoma.[4] Such long-term problems are fatal, lethal and a reason for 96% of the deaths owing to viral hepatitis. The people infected with HCV are unaware about the infection, as they don't receive the well identified symptoms till complications emerge. The people may be infected for a period greater than 30 years before they develop clinical symptoms.

Till the development of directly acting antivirals (DAA), ribavirin in combination with the PEGlyated interferon was the only option available for the treatment. Nonetheless, it has been accompanied

Curr. Pharm. Res. **2019**, *9(3)*, 3146-3154

Current Pharma Research
ISSN-2230-7842
CODEN-CPRUE6
www.jcpronline.in/

Research Article

RP-HPLC and UV-Spectrophotometric Methods Development and Validation for Simultaneous Estimation of Teneligliptin and Metformin in Fixed Dose Combination.

Anuruddha Chabukswar[1], Pramod Sakpal[2*]

[1]School of Pharmacy, Dr. Vishwanath Karad MIT World Peace University, Kothrud, Pune – 411038, Maharashtra, India.

[2]Department of Pharmaceutical Chemistry, Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune – 411033, Maharashtra, India.

Received 09 May 2019; received in revised form 02 June 2019; accepted 02 June 2019

***Corresponding author E-mail address:** *psakpal18@gmail.com*

ABSTRACT

The reliable, economical, sensitive and reproducible RP-HPLC and UV- Spectrophotometric methods were developed and validated for the simultaneous estimation of Teneligliptin (TEN) and Metformin (MET) in combined dosage form. In the RP-HPLC method the mobile phase used was 50mM potassium dihydrogen orthophosphate (KH_2PO_4) buffer: Methanol (40:60) at P^H 3.0 and flow rate was 1.0 ml per min. The method was scanned at λmax 250 nm for both the drugs. The linearity range for MET and TEN was found to be 200 - 600 µg/ml and 1 - 30 µg/ml with regression correlation coefficient (R^2) 0.9996 and 0.9991 respectively. The retention time for Metformin and Teneligliptin was found to be 10.3 min and 21.56 min respectively. The UV-Spectrophotometric simultaneous equation and Absorption Ratio methods were developed and validated in which the λmax for Metformin and Teneligliptin was found to be 232 nm and 243 nm, the Isoabsorbtive point was found to be 249 nm. The linearity for both the drugs was found to be 5-30 µg/ml and regression coefficient equation was 0.9896 and 0.9988 for MET and TEN respectively. The developed methods of RP-HPLC and UV-Spectrophotometry were validated as per ICH guidelines.

KEYWORDS

Teneligliptin (TEN), Metformin (MET), Correlation equation; RP-HPLC, UV-Spectrophotometry, ICH Guidelines.

ISSN (Online): 0975-8232,
ISSN (Print): 2320-5148

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH
An International Journal published monthly
An Official Publication of Society of Pharmaceutical Sciences and Research

INDEXED IN Embase An Elsevier Product

STABILITY INDICATING RP – HPLC METHOD DEVELOPMENT AND VALIDATION FOR SIMULTANEOUS ESTIMATION OF AMLODIPINE AND CHLORTHALIDONE IN BULK AND TABLET DOSAGE FORM

HTML Full Text

STABILITY INDICATING RP - HPLC METHOD DEVELOPMENT AND VALIDATION FOR SIMULTANEOUS ESTIMATION OF AMLODIPINE AND CHLORTHALIDONE IN BULK AND TABLET DOSAGE FORM

P. H. Sakpal [*1] and A. R. Chabukswar [2]

Department of Pharmaceutical Chemistry [1], Marathwada Mitra Mandal's College of Pharmacy, Off Kalewadi Phata Pimpri Road, Thergaon (Kalewadi), Pune - 411033, Maharashtra, India.

Department of Pharmaceutical Chemistry [2], School of Pharmacy, Dr. Vishwanath Karad MIT World Peace University, Kothrud, Pune - 411038, Maharashtra, India.

ABSTRACT: The RP-HPLC stability-indicating assay method has been developed and validated for the estimation of the amlodipine and chlorthalidone in bulk and combined dosage form. The method was optimized by using the mobile phase as a mixture of 0.1% formic acid: methanol: acetonitrile in the ratio of (50:5:45 v/v) at

DRUG DEVELOPMENT AND INDUSTRIAL PHARMACY
https://doi.org/10.1080/03639045.2019.1602138

Taylor & Francis
Taylor & Francis Group

RESEARCH ARTICLE

Solubilization and determination of solution thermodynamic properties of itraconazole in different solvents at different temperatures

Sachin K. Jagdale[a,b] and Rajesh B. Nawale[c]

[a]Department of Pharmaceutics, Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra, India; [b]Y B Chavan College of Pharmacy, Rauza Bagh, Aurangabad, India; [c]Department of Pharmacology, Government College of Pharmacy, Aurangabad, Maharashtra, India

ABSTRACT

The solubility of itraconazole (ITRA) in thirteen pure solvents including water, dimethyl sulphoxide, acetonitrile, methanol, 1,4-butanediol, ethanol, isopropyl alcohol, n-butanol, octanol, ethyl acetate, toluene, benzene, 1,4-dioxane were estimated at the temperatures ranging from 293.15 K to 318.15 K under atmospheric pressure (0.1 MPa). The results reflected that the solubility of ITRA was a function of temperature and was increased with a rise in temperature in each solvent. Moreover, the solubility in polar solvents was less and found to be increased in non-polar solvents. Furthermore, the results of solubilization were correlated by the Van't Hoff equation, the modified Apelblat equation, the Buchowski – Ksiazaczak λh equation, and the polynomial empirical equation. The polynomial empirical equation proved to be more accurate and suitable for the correlation of solubilities of ITRA in studied solvents at various temperatures. Besides, theoretical ideal solubilities, activity coefficients, and thermodynamic properties of the solution process including standard molar enthalpy, entropy, Gibbs free energy, and excess enthalpy were calculated from the experimental solubility data. These thermodynamic parameters indicated that the solubilization process was not spontaneous, endothermic, and enthalpy driven. Such thermodynamic based solubility data of ITRA will be of immense help in solubilization, synthesis, process development, preformualtion, and dosage form development in pharmaceuticals.

ARTICLE HISTORY
Received 13 October 2018
Revised 7 February 2019
Accepted 28 March 2019

KEYWORDS
Itraconazole; solubilization; thermodynamic model based solubility correlation; activity coefficient; solution thermodynamics; excess enthalpy

Introduction

Itraconazole (ITRA) (Figure 1; IUPAC name (±)-1-[(RS)-s-butyl]-4-[p-[4-[p-[[(2R,4S)-2-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1ylmethyl)-1,3-dioxolan-4-yl] methoxy] phenyl]-1-piperazinyl] phenyl]-Δ2-1,2,4-triazolin-5-one; molecular formula $C_{35}H_{38}Cl_2N_8O_4$ with molar mass 705.64 g mol^{-1}) appears as white crystalline powder.

ITRA is a triazole derivative [1] possessing a wide spectrum of activity against variety of fungal species such as *Trichophyton, Candida, Cryptococcus, Neoformans, Aspergillus, Pseudallescheria boydii, Blastomyces* [2–4]. It is effective against local fungal infections caused by dermatophytes as well as systemic fungal infections [5,6]. Antifungal activity is mainly linked with cytochrome P450 enzyme – lanosterol C14α demethylase (CYP51). This enzyme catalyzes the major step involved in the conversion of lanosterol to ergosterol [7,8]. ITRA inhibits this CYP51 resulting in accumulation of 14α - methyl sterols in the fungal cell membranes. These sterols are unlike in shape as compared to ergosterol. Amassing of such sterols lead to altered membrane permeability and dysfunctioning of membrane proteins finally leading to fungal cell death [9].

ITRA is a highly lipophilic drug (log $P = 6.2$) with poor aqueous solubility (less than 1 ng/ml) [10–12]. Owing to such physicochemical properties, it belongs to class II of the biopharmaceutical classification system with poor solubility and high permeability [13]. It was reported that dissolution is rate limiting step which subsequently reduces *in vivo* absorption of ITRA leading to the limited oral bioavailability of 10–20% [14].

Moreover, numerous efforts have been made to improve the solubility and dissolution of ITRA. It included solid dispersion [15], eutectic mixtures [16], hot melt extrusion [17], polymeric micelle [18], nanosuspension [19], cocrystallization [20], and nanoemulsion [21].The solubility data of solutes in different solvents is an important indicator and serves as a useful tool in design, development, and optimization of different pharmaceutically important processes like preformulation, solubilization, synthesis, purification, crystallization, pharmaceutical dissolutions, and formulation developments [22–24]. For the development of above pharmaceutically important processes; the selection of suitable solvent, their solubilizing power, and the suitable temperature is critical and has a significant impact over the process capabilities [25]. Therefore, it is important to obtain comprehensive solubility and solution thermodynamic data of drug in different solvents at different temperatures. Different pure solvents like water, dimethyl sulphoxide, acetonitrile, methanol, 1,4-butanediol, ethanol, isopropyl alcohol, n-butanol, octanol, ethyl acetate, toluene, benzene, and 1,4-dioxane are commonly preferred in above mentioned pharmaceutical processes for enhancement of solubility of poorly water-soluble active pharmaceutical ingredients like ITRA. All these solvents are preferred due to their solubilization/stabilization effects over numerous poorly soluble/degradable drug substances [26]. Moreover, DMSO has been used in the commercially available subcutaneous implant formulations of leuprolide acetate and topical formulation of idoxuridine [27,28]. Acetonitrile is widely used

CONTACT Rajesh B. Nawale nawalepubs@gmail.com Department of Pharmacology, Government College of Pharmacy, Aurangabad 431005, Maharashtra, India

Journal of Pharmaceutical Innovation
https://doi.org/10.1007/s12247-019-09384-6

ORIGINAL ARTICLE

Estimation and Correlation of Solubility of Practically Insoluble Drug Itraconazole in 1,4-Butanediol + Water Mixtures Using Extended Hildebrand Solubility Approach

Sachin K. Jagdale[1] · Rajesh B. Nawale[2]

Abstract

Purpose Extended Hildebrand solubility approach (EHSA) was applied to estimate and correlate the solubilities of itraconazole in 1,4-butanediol + water mixtures at 298.15 K.

Methods Experimental solubilities and properties like entropy of fusion and ideal mole fraction solubilities were determined. EHSA was applied to estimate interaction parameter W to understand the solute solvent interaction. Theoretical solubilities were calculated by using W as a function of solubility parameter of solvent blend (δ_1) and by direct method using logarithmic experimental solubilities ($\log X_2$) against solubility parameter of solvent mixture (δ_1). Prediction capacities of EHSA and direct method were compared using mean percent deviations obtained while comparing theoretical solubilities with experimental ones.

Results Itraconazole solubility was increased in all the proportions of solvent mixtures and was found to be highest at 0.9 mass fraction of 1,4-butanediol where solubility parameter of drug matched with solvent mixture. Prediction capacity of EHSA was found to be better with regular polynomial equation of order 5 with mean deviation of − 1.69%.

Conclusions Using EHSA, the solubility of any solute can be adequately predicted with the knowledge of few physicochemical properties.

Keywords Itraconazole · 1,4-Butanediol + water solvent mixture · Solute solvent interactions · Extended Hildebrand solubility approach · Solubility parameter

Introduction

Triazole antifungal agents are commonly preferred against broad spectrum of fungal infections caused by different species [1, 2]. Itraconazole (Fig. 1) is a classic example of this category and more commonly recommended for oral [3, 4], topical [5], and intravenous [6] as well as ocular applications [7] to treat several fungal infections. According to the biopharmaceutics classification system (BCS), it is classified as BCS class II drug owing to its practically insoluble characteristics [8]. Such physicochemical properties restrict the applications of itraconazole. Also, its behavior in aqueous and aqueous miscible solvents is not fully understood until date. Under the purview of these facts, cosolvency could be regarded as one of the best techniques to overcome the solubility issues in pharmaceutical sciences for process and product development [9–11]. It is notable that the knowledge about drug's behavior in solution form is useful for purification, crystallization, preformulation, and dosage form developments. Due to such reasons, estimation of drug solubilities in all the probable cosolvent mixtures is valuable to generate the comprehensive physico-chemical data about the industrially important solution forms of the drug.

It is well known that various empirical models have been developed for the correlation and prediction of solubility. These models are capable of predicting the solubility of any solute in neat as well as in solvent blends by the correlation of various physicochemical properties [12–14]. In literature, such models have been used for variety of pharmaceutical applications like formulation design and development [15, 16], prediction of drug activity [17], purification and

✉ Rajesh B. Nawale
nawalepubs@gmail.com

[1] Department of Pharmaceutics, Marathwada Mitramandal's College of Pharmacy, Thergaon (Kalewadi), Pune, Maharashtra, India

[2] Department of Pharmacology, Government College of Pharmacy, Aurangabad, Maharashtra 431005, India

Published online: 13 March 2019

Turk J Pharm Sci 2020;17(2):228-234
DOI: 10.4274/tjps.galenos.2019.20438

ORIGINAL ARTICLE

Extended Hildebrand Solubility Approach: Prediction and Correlation of the Solubility of Itraconazole in Triacetin: Water Mixtures at 298.15°K

Genişletilmiş Hildebrand Çözünürlük Yaklaşımı: 298,15°K'da İtrakonazolün Triasetin: Su Karışımlarında Çözünürlüğünün Belirlenmesi ve Korelasyonu

Sachin JAGDALE[1], Rajesh B NAWALE[2]*

[1]Marathwada Mitramandal's College of Pharmacy, Department of Pharmaceutics, Thergaon, Pune, India
[2]Government College of Pharmacy, Department of Pharmacology, Aurangabad, Maharashtra, India

ABSTRACT

Objectives: The aim of the study is to explore the suitability of an empirical approach for the extended Hildebrand solubility approach (EHSA) to predict and correlate the solubility of the crystalline drug itraconazole (ITRA) in triacetin: water mixtures.

Materials and Methods: The physicochemical properties of ITRA like fusion enthalpy, solubility parameter, and ideal mole fraction solubility were estimated. The solubilities of ITRA in mixed solvent blends comprising triacetin: water were determined at 298.15°K. Theoretical solubilities were back calculated using a polynomial regression equation of the interaction energy parameter W as a function of the solubility parameter (δ_1) of the solvent mixture. Similarly, the solubilities were predicted by direct method based on the use of logarithmic experimental solubilities ($log X_1$) against the solubility parameter (δ_1) of the solvent mixture. The predictive capabilities of both EHSA and the direct method were compared using mean percent deviations.

Results: The solubility of ITRA was increased in all the triacetin: water blends and was highest in the blend in which the solubility parameter of ITRA equaled that of the solvent mixture. The prediction capacities of the direct method (mean % deviation was -1.89%) were better than those of EHSA (mean % deviation was 9.76%) in the fifth order polynomial.

Conclusion: The results indicated that the solubility of any crystalline solute can be adequately predicted and correlated with the mere knowledge of physicochemical properties and EHSA. The information could be of help in process and formulation development.

Key words: Itraconazole, extended Hildebrand solubility approach, interaction energy, solubility parameter, prediction, correlation of solubilities

ÖZ

Amaç: Triasetin: su karışımlarında kristal formdaki itrakonazol (ITRA)'nın çözünürlüğünün genişletilmiş Hildebrand çözünürlük yaklaşımı (EHSA) için uygunluğunun deneysel bir yaklaşımla tahmin ve korele edilmesi bu araştırmanın amacıdır.

Gereç ve Yöntemler: ITRA'nın füzyon entalpisi, Hildebrand çözünürlük yaklaşımı çözünürlük parametresi ve ideal mol oranı gibi fizikokimyasal özellikleri tahmin edilmiştir. ITRA'nın triastin: sudan oluşan karışım halindeki çözeltilerdeki çözünürlükleri 298,15°K'da belirlenmiştir. Teorik çözünürlükleri çözelti karışımındaki çözünürlük parametresi (δ_1)'nin bir fonksiyonu olarak etkileşim enerji parametresi W kullanılarak polinomik regresyon denklemi ile hesaplanmıştır.

Bulgular: Tüm triasetin: su karışımlarında ITRA'nın çözünürlüğü artmıştır ve çözünürlüğün en yüksek olduğu karışım ITRA'nın çözünürlük parametresinin çözelti karışımınınkine eşit olduğu karışımdır. Doğrudan yöntemin tahmin kapasitesi (ortalama % sapması -%1,89) beşinci polinomda sırada EHSA'dan (ortalama % sapması %9,76) daha iyi bulunmuştur.

Sonuç: Bu sonuçlar çözünen kristalin çözünürlüğünün tek başına fizikokimyasal özellikler ve EHSA bilgileriyle yeterince öngörülebileceğini ilişkilendirilebileceğini göstermiştir. Bu bilgi süreç ve formülasyon geliştirmede yardımcı olabilir.

Anahtar kelimeler: İtrakonazol, genişletilmiş Hildebrand çözünürlük yaklaşımı, etkileşim enerjisi, çözünürlük parametresi, tahmin, çözünürlükler korelasyonu

*Correspondence: E-mail: nawalepubs@gmail.com, Phone: +91 9890836437, ORCID-ID: orcid.org/0000-0003-0606-0810
Received: 11.12.2018, Accepted: 12.02.2019

Curr. Pharm. Res. **2019**, *9(4)*, 3237-3246

Current Pharma Research
ISSN-2230-7842
CODEN-CPRUE6
www.jcpronline.in/

Research Article

Synthesis, Characterization and Biological Screening of Substituted Indoledihydro-pyrimidine derivatives.

Ganesh S. Mhaske[1,*], Rahul H. Khiste[1], Surekha A. Shinde[1], Sagar A. Jadhav[2]

[1]Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-411033, Maharashtra, India.

[2]Dr. Shivajirao Kadam College of Pharmacy, Kasbe Digraj, Sangli-416416, Maharashtra, India.

Received 16 April 2019; received in revised form 03 June 2019; accepted 08 June 2019

***Corresponding author E-mail address:** *hariomganesh79@gmail.com*

ABSTRACT

A series of Schiff bases of N-Substituted-4-(1H-indol-3-yl)-6-methyl-2-oxo-1,2,3,4-tetrahydropyrimidone-5-carbohydrazide U(1-5) were synthesized as per the scheme reported. Structures of synthesized compounds were confirmed by spectral study such as FT-IR, ^{1}H-NMR, Mass and Elemental analysis. The synthesized compounds were subjected to antibacterial evaluation. The structure of synthesized derivatives correlated and it has been observed that electron donating groups like hydroxyl U-4, attached to the phenyl ring increases antibacterial activity. The compound U-5, have shown excellent activity against *E. coli* compared with standard drug ciprofloxacin.

KEYWORDS

Indole, Biginelli reaction, antibacterial activity, MIC determination.

ISBN : 978-93-89302-99-7
Price ₹ 175/-
(A241)

Semester 3 - Second Year B. Pharmacy (A241) Price ₹ 175/- B-30

SPPU

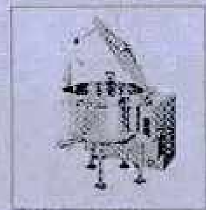
PHARMACEUTICAL ENGINEERING

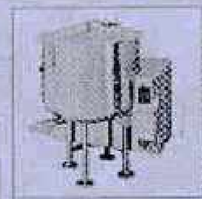
Semester 3 - Second Year B. Pharmacy

Dr. Avinash R. Tekade Dr. Vishal V. Pande
Keyur V. Shastri

SUBJECTS | AUTHORS | LEADERSHIP | EXPERIENCE

BIGGER & BETTER





Features

- Includes MCQ'S

TECH-NEO PUBLICATIONS
A Sachin Shah Venture

(A241)
₹ 175/-

19-2<

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

Mentored by
RUSA, Maharashtra

This is to certify that

Dr. Manohar J. Patil, Principal, Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

has convener for this Faculty Development Program in

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)
(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

Mentored by
RUSA, Maharashtra

सत्यमेव जयते
MHRD

This is to certify that

Dr. Mukesh P. Ratnaparkhi

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18 th November to 27 th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitramandal's College of Pharmacy Estd 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

सत्यमेव जयते
MHRD

Mentored by
RUSA, Maharashtra

राष्ट्रीय उच्चतर शिक्षा अभियान
NATIONAL HIGHER EDUCATION MISSION

This is to certify that

Dr. Avinash R. Tekade

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18 th November to 27 th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitramandal's College of Pharmacy Estd 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada
COLLEGE O
Thergaon (Kalew

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)
(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

सत्यमेव जयते
MHRD

Mentored by
RUSA, Maharashtra

राष्ट्रीय उच्चतर शिक्षा अभियान
NATIONAL HIGHER EDUCATION MISSION

This is to certify that

Dr. Prasad V. Kadam

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

सत्यमेव जयते
MHRD

Mentored by
RUSA, Maharashtra

राष्ट्रीय उच्चतर शिक्षा अभियान
NATIONAL HIGHER EDUCATION MISSION

This is to certify that

Mrs. Babita A. Agarwal

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18 th November to 27 th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)
(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

Mentored by
RUSA, Maharashtra

This is to certify that

Dr Sampada R. Dalvi

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitramandal's College of Pharmacy • Thergaon, Pune-33 • Estd 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)
(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

Mentored by
RUSA, Maharashtra

सत्यमेव जयते
MHRD

This is to certify that

Mr. Sachin K. Jagdale

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

सत्यमेव जयते
MHRD

Mentored by
RUSA, Maharashtra

राष्ट्रीय उच्चतर शिक्षा अभियान
NATIONAL HIGHER EDUCATION MISSION

This is to certify that

Mr. Shailendra S. Salvankar

has participated in the Faculty Development Program as a Trainer

Industrial Pharmacy-II

From 18 th November to 27 th November 2019, at

Marathwada Mitramandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitramandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)
(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

This is to certify that

Dr. Mukesh P. Ratnaparkhi, Assoc. Prof. Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

has participated in the Faculty Development Program as a Volunteer

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

This is to certify that

Dr. Prasad V. Kadam, Assoc. Prof. Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

has participated in the Faculty Development Program as a Volunteer

Industrial Pharmacy-II

From 18 th November to 27 th November 2019, at

Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator, PMMMNMTT, ICT

Centre for Education in Pharmaceutical Sciences Technology and Management (CEPSTM)

Under the Scheme of

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

(MHRD, Govt. of India)

Faculty Development Centre

Institute of Chemical Technology

Department of Pharmaceutical Sciences and Technology

Nathalal Parekh Marg, Matunga (East), Mumbai – 400019

This is to certify that

Dr. Sachin K. Jagdale, Assit. Prof. Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

has participated in the Faculty Development Program as a Volunteer

Industrial Pharmacy-II

From 18th November to 27th November 2019, at

Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra

Prof. Shreerang V. Joshi
Head – Department of Pharmaceutical Sciences and Technology, ICT

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Vikas N. Telvekar
Coordinator PMMMNMTT, ICT

Marathwada Mitra Mandal's

College of Pharmacy

S. No. 4/17, Sector No. 34, PCNTDA

Thergaon (Kalewadi) Pune-411033

NOTICE

Date: 04/10/2019

All the students of Final year D. Pharm., B. Pharm and M. Pharm are hereby noticed that, the three days "Entrepreneurship Awareness Camp (EAC)" is arranged on 17th to 19th October 2019 at our institute. The detailed schedule of the same is as:

Sr. No.	Date & Time	Venue	Resource Person
1	17th to 19th October 2019; Thursday, Friday and Saturday 9.30 a.m. to 5.00 p.m.	Seminar Hall	Experts from Pharmaceutical Industries and Successful Entrepreneurs

All are informed to attend the same. **"Attendance is compulsory"**

Objective of EAC:

1) To impart awareness about entrepreneurship as a career choice.
2) To impart awareness about business opportunities.
3) To impart awareness about support system.
4) To present few role models in entrepreneurship.

Methodology:

1) One way lectures.
2) Sharing of experiences.
3) Panel discussion.
4) Question- answers.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Dr. Rahul H. Khiste

Dean, Training, Placement, III & E.D. Cell

Dr. Manohar J. Patil

(Principal)

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's

College of Pharmacy

S. No. 4/17, Sector No. 34, PCNTDA

Thergaon (Kalewadi) Pune-411033

CIRCULAR

Date: 04/10/2019

All faculty members are hereby informed that the three days "Entrepreneurship Awareness Camp (EAC)" is arranged on 17th to 19th October 2019 at our institute for Final year D. Pharm., B. Pharm and M. Pharm students. The detailed schedule of the same is as:

Sr. No.	Date & Time	Venue	Resource Person
1	17th to 19th October 2019; Thursday, Friday and Saturday 9.30 a.m. to 5.00 p.m.	Seminar Hall	Experts from Pharmaceutical Industries and Successful Entrepreneurs

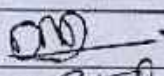
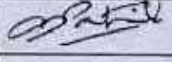
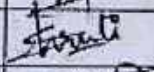
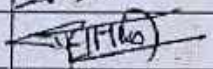
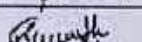
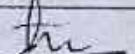
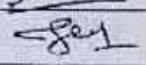
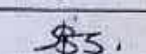
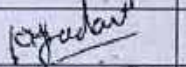
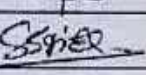
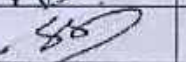
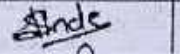
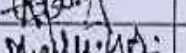
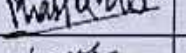
Dr. Rahul H. Khiste
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Dr. Manohar J. Patil
(Principal)

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Name of Faculty	Sign	Name of Faculty	Sign
ART		VSP	
PJP		RRN	
~~RTK~~		MSB	
MPR		SMA	
PVK		PNB	
BAA		SAK	
PHS		GSM	
SDD		PJM	
SKJ		TSS	
KNY		SBG	
SSS			
SG			
SAS			
ASK			
GSM			
ARN			

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S

COLLEGE OF PHARMACY

Thergaon, Pune-411033

। येथे बहुतांचे हित ।

MMCOP

Bestowing Health & Happiness

ENTREPRENEURSHIP AWARENESS CAMP (EAC)

Sponsored by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology, (DST-NIMAT) Govt. of India, New Delhi.

17th to 19th October 2019

Training, Placement, III & E. D. Cell, MMCOP, Pune

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Estd. 2006

....building Pharmacy Professionals through Education par Excellence

ANNEXURE-II

DST – NIMAT PROJECT-2019-20

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra
Dated, 17/10/2019 to 19/10/2019

PROGRAMME SCHEDULE

Date and Day	Session *	Subject / Topic	Faculty
1	2	3	4
17/10/2019 1st Day		Inauguration- Camp Objective, Why Entrepreneurship (General Concepts)	Mr. Rahul Khiste
	I	Historical background-Indian values vis-à-vis Entrepreneurship and the present	Mr. Amit Medhekar
	II	Identification of Business opportunities and Mechanisms of product selection	Ms. Sushma Naidu Technical Advisor
	III	Technology-assistance from R&D labs and other institutions on choice of technology etc.	Mr. Rushikesh Parandkar
	IV	Pharmaceutical Business Opportunities	Mr. Santosh Kadam
18/10/2019 2nd Day	I	How to start a SSI unit (General concept about the Govt. formalities, rules & regulation, location, and different aspect of an industry.	Mr. Ashok Pattar
	II	Technical & commercial aspects of SSI unit (General concept only)	Mr. Hemant Bhagwat
	III	Financial aspects of SSI unit including salient features of a project report	Mr. Yuvraj Lambole
	IV	Schemes of assistance and Support available from Govt. agencies, banks, financial institutions, SFCs	Mr. Sunil Shete
19/10/2019... 3rd day	I	Creativity and Business- The man behind the Venture	Mr. Ganesh Mhaske
	II	Communication skills for better results in business	Dr. Rahul Khiste
	III	Industry Visit at Nulife Pharmaceuticals, Pune	Dr. Rahul Khiste, Mr. Ganesh Mhaske Mr. Amar Shelke,
	IV	Industry Visit at Nulife Pharmaceuticals, Pune	Dr. Rahul Khiste, Mr. Ganesh Mhaske Mr. Amar Shelke,

* = Each session is one hour fifteen minutes

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

Head of Institution
Dr. Manohar J. Patil
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

DST – NIMAT PROJECT-2019-20

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra

PROFORMA FOR POST PROGRAMME REPORT (PPR) OF EAC

1.	**Name & Address of Programme Implementing Agency** *(with Tel/ Fax /E-mail)*	: Marathwada Mitra Mandal's, College Of Pharmacy,S. No. 4/17, Sector No. 34. PCNTDA,Off Kalewadi Phata, Pimpri Road, Kalewadi (Thergaon), Pune – 411 033. Maharashtra. Tel- 8446060841 E. Mail-mmcopharm@yahoo.co.in
2.	**Programme Location**	: Seminar Hall of Marathwada Mitra Mandal's, College of Pharmacy, Pune.
3.	**Programme Date**	: From 17/10/2019 to 19/10/2019
4.	**Name of the Coordinator**	: Dr. Rahul H. Khiste
5.	**No. of candidate attended the programme**	: 92 (Male-39 Female-53)
6.	**List of participants**	: ***ANNEXURE – I***
7.	**Program schedule**	: ***ANNEXURE – I I***
8.	**List of resource persons**	: ***ANNEXURE – III***
9.	**List of industries visited**	: ***ANNEXURE – IV***
10.	**Participant's feedback**	: ***ANNEXURE – V***
11.	**Photographs of Programme**	: Attach one group photo, one classroom photo and one industry/institute visit photo

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Head of Institution
Dr. Manohar J. Patil
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ANNEXURE-I

DST – NIMAT PROJECT-2019-20

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-411033, Maharashtra
Dated, 17/10/2019 to 19/10/2019

LIST OF PARTICIPANTS

Sr. No.	Name of Participant	Age	Male / Female	Education	Category: Gen / SC / ST / OBC / Minority	Aadhaar Number
1	2	3	4	5	6	
1	Atole Kajal Vilas	21	Female	B. Pharm	NT-C	256650423906
2	Balawade Rutuja Vilas	21	Female	B. Pharm	OBC	319968710231
3	Bhale Shrikant Bapurao	22	Male	B.Pharm	NT-C	785737377501
4	Bhange Rupali Keshav	22	Female	B.Pharm	ST	314285025098
5	Bhure Alka Ramesh	22	Female	B.Pharm	Open	918010985816
6	Biradar Mohini Bhagwan	21	Female	B.Pharm	Open	598074010086
7	Buddepatil Sneha Rajendra	20	Female	B.Pharm	OBC	725696432390
8	Chaudhari Neha Kishor	22	Female	B.Pharm	OBC	690207829833
9	Chaudhari Siddhesh Shamkant	22	Male	B.Pharm	OBC	736239006257
10	Chaure Amit Sanjay	21	Male	B.Pharm	ST	BVUPC5680E
12	Datir Akash Revji	22	Male	B.Pharm	NT-C	338965736792
13	Dhopate Narayan Nagnath	21	Male	B.Pharm	OPEN	706263524244
14	Dhule Komal Dilip	20	Female	B.Pharm	OBC	592719316360
15	Doiphode Netra Gajananrao	22	Female	B.Pharm	OBC	226339884651
16	Gadekar Aishwarya Machindra	22	Female	B.Pharm	SC	297454500760
17	Ganorkar Saylee Naresh	20	Female	B.Pharm	OPEN	282469253738
18	Gavali Shivani Pappu	20	Female	B.Pharm	SC	689880431862
19	Gopnar Vitthal Venkatrao	21	Male	B.Pharm	NT-C	913286105199
20	Gore Pratik Somnath	21	Male	B.Pharm	OBC	765687334864
21	Jadhav Vaishnavi Anil	21	Female	B.Pharm	OPEN	908893273520
22	Jogdand Abhay Kailas	21	Male	B.Pharm	OPEN	252050624223
23	Jorvekar Ankita Rajendrakumar	21	Female	B.Pharm	OBC	218020724736
24	Kadbane Ankita Anil	21	Female	B.Pharm	OBC	602900929175
25	Kaiwade Priyanka Shyam	22	Female	B.Pharm	DT/VJ	289378938545
26	Kanakdande Tejaswini Mohanrao	22	Female	B.Pharm	OPEN	247104888891
27	Kashid Swapnil Suresh	22	Male	B.Pharm	OBC	564271328742
28	Khairnar Tanmay Dilip	22	Male	B.Pharm	OBC	979373015212
29	Khandekar Pooja Rajkumar	21	Female	B.Pharm	NT-C	738735527745
30	Khatke Sujata Shivaji	20	Female	B.Pharm	NT-C	864821453101
31	Mali Vaibhavi Premraj	21	Female	B.Pharm	OBC	648848041967
32	More Samiksha Rajesh	21	Female	B.Pharm	OBC	712942725408
33	Naiknaware Santosh Gorakhrao	22	Male	B.Pharm	OPEN	670663984011
34	Netke Sanket Tukaram	22	Male	B.Pharm	SC	332765711213
35	Nimhan Nikita Vasant	21	Female	B.Pharm	OPEN	377915621095
36	Padvi Jagadish Nansing	25	Male	B.Pharm	ST	969888577981
37	Palkar Rushikesh Narayan	21	Male	B.Pharm	OBC	369182660318
38	Parinche Snehal Pandurang	20	Female	B.Pharm	NT-B	614461395663
39	Patil Ankita Vikas	20	Female	B.Pharm	OPEN	519974811386
40	Patil Prathamesh Mahadev	21	Male	B.Pharm	OPEN	513805131906
41	Prajapati Jigna Bharat	22	Female	B.Pharm	OBC	311084499664
42	Raut Anup Shankarrao	22	Male	B.Pharm	OBC	481894164644
43	Rutele Nikita Pandurang	20	Female	B.Pharm	OBC	424523109571

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

44	Sarphale Bhumika Dhonduram	20	Female	B.Pharm	OPEN	612976261074
45	Satvilkar Fahad Akhatar	21	Male	B.Pharm	OPEN	861580794314
46	Sehgal Karan Rajesh	20	Male	B.Pharm	OPEN	273957272274
47	Shaikh Nida Abubakar	21	Female	B.Pharm	OPEN	426926526764
48	Somvanshi Poonam Devidas	21	Female	B.Pharm	OBC	486432702514
49	Suryawanshi Sapna Ganesh	21	Female	B.Pharm	OPEN	996152554128
50	Suryawanshi Sheetal Laxman	21	Female	B.Pharm	SC	742160608239
51	Talape Supriya Dhondu	20	Female	B.Pharm	ST	637841902341
52	Thakar Bharti Rajesh	21	Female	B.Pharm	ST	804604366204
53	Thorave Mrunalini Suhas	21	Female	B.Pharm	SC	286255947616
54	Warude Aditi Deepak	20	Female	B.Pharm	OBC	272738940344
55	Ansarwade Dnyaneshwar Bhagwat	18	Male	D. Pharm	Gen	869077527498
56	Badgujar Pankaj Ashok	20	Male	D. Pharm	OBC	238241411582
57	Bhoye Manisha Raghunath	19	Female	D. Pharm	ST	519587483423
58	Chavan Atharv Sachin	19	Male	D. Pharm	Gen	299071279198
59	Chavan Vikas Pandit	19	Male	D. Pharm	OBC	331090131291
60	Choudhary Bhagwanti Pakaram	23	Female	D. Pharm	Gen	973249901452
61	Choudhary Prakash Achalram	20	Male	D. Pharm	Gen	293601811458
62	Datir Rohit Dhondibhau	19	Male	D. Pharm	OBC	652646534511
63	Daundkar Vaishali Hiraman	23	Female	D. Pharm	Gen	324856809437
64	Devmane Pramod Udhav	19	Male	D. Pharm	OBC	524449785031
65	Dhande Kaushal Bhagwan	19	Male	D. Pharm	Gen	944205878130
66	Faltankar Jagannath Bhagwat	21	Male	D. Pharm	OBC	420566462014
67	Gade Rushikesh Vilas	20	Male	D. Pharm	Gen	900679001047
68	Gade Tejas Subhash	19	Male	D. Pharm	Gen	611304899428
68	Garad Srushti Kumar	18	Female	D. Pharm	Gen	201519597612
69	Garud Darshan Sanjay	18	Male	D. Pharm	Gen	411596831925
70	Gawade Pooja Ashok	18	Female	D. Pharm	OBC	917314522284
71	Ghosalkar Omkar Shrikant	19	Male	D. Pharm	Gen	694827672107
72	Giri Ashwini Shriram	19	Female	D. Pharm	OBC	529812262181
73	Gurav Manisha Ramkishan	19	Female	D. Pharm	OBC	773439808330
74	Jadhav Aditi Dhanaji	19	Female	D. Pharm	Gen	776283980105
75	Jadhav Hrithik Rahul	19	Male	D. Pharm	Gen	562100241376
76	Jadhav Saurabh Fakaru	19	Male	D. Pharm	SC	579995352806
77	Kamble Pratidnya Vitthal	19	Female	D. Pharm	SC	848911237337
78	Khadekar Harshal Ashok	19	Male	D. Pharm	OBC	932059422746
79	Kumbhar Ganesh Jyotiram	19	Male	D. Pharm	OBC	450801119158
80	Madde Shweta Prashant	19	Female	D. Pharm	Gen	784228489452
81	Malu Jayesh Satyanarayan	18	Male	D. Pharm	Gen	252274442273
82	Mane Rutuja Umesh	20	Female	D. Pharm	Gen	313963002384
83	Mule Saurabh Bhairavnath	20	Male	D. Pharm	Gen	494360692392
84	Naikwadi Rutuja Shivaji	19	Female	D. Pharm	Gen	837860292411
85	Navasare Nikita Shashikant	19	Female	D. Pharm	Gen	273900055438
86	Patil Upendra Vilas	20	Male	D. Pharm	Gen	939952452719
87	Pawar Pratiksha Yuvraj	19	Female	D. Pharm	OBC	350682525266
88	Rathod Kranti Shivram	27	Female	D. Pharm	OBC	282512030145
89	Sawant Rutuja Rajaram	19	Female	D. Pharm	Gen	858739583391
90	Shinde Ankita Anil	20	Female	D. Pharm	OBC	488321848414
91	Shinde Rushikesh Sampat	19	Male	D. Pharm	Gen	551500861793
92	Sonawane Tejaswi Kailas	18	Female	D. Pharm	SC	408284552063

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy • Estd. 2006 • Thergaon, Pune-33

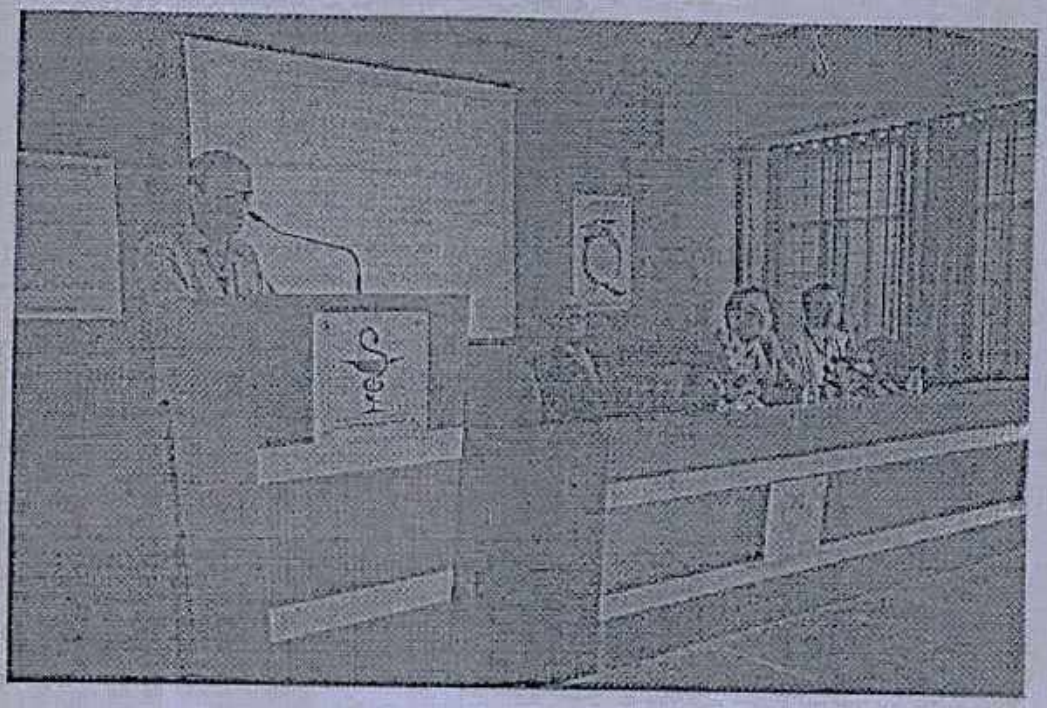
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

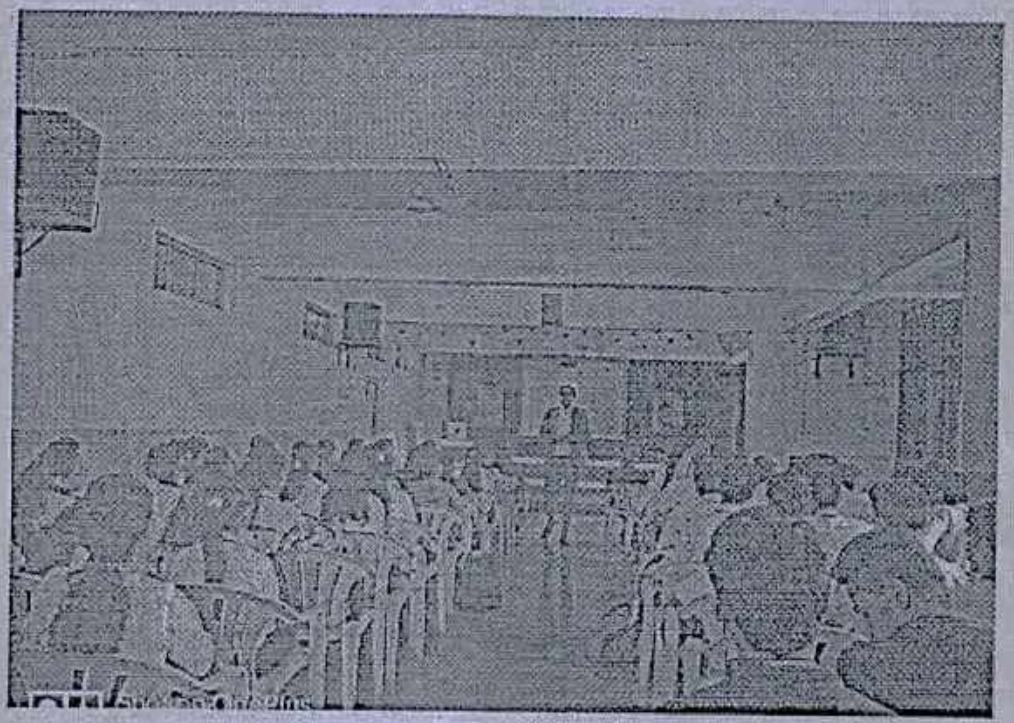
Head of Institution
Dr. Manohar J. Patil
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

DST – NIMAT PROJECT-2019-20

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra, Dated 17/10/2019 to 19/10/2019

Photographs of Programme





Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY,

THERGAON, PUNE-411 033 (M.S)

2018-2019

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH

Received on 03 January, 2018; received in revised form, 16 March, 2018; accepted, 18 March, 2018; published 01 September 2018

DESIGN, DEVELOPMENT AND CHARACTERIZATION OF SELF MICRO EMULSIFYING DRUG DELIVERY SYSTEM FOR ACECLOFENAC

Mukesh P. Ratnaparkhi *[1] and Praveen D. Chaudhari [2]

Department of Pharmaceutics [1], Marathwada Mitra Mandals College of Pharmacy, Thergaon, Pune - 411033, Maharashtra, India.

Department of Pharmaceutics [2], PES Modern College of Pharmacy, Nigdi, Pune - 411044, Maharashtra India.

Keywords:

Aceclofenac, SMEDDS, Phase Diagram, Dissolution rate

Correspondence to Author:
Mukesh P. Ratnaparkhi

Professor & Dean Student Affair, Department of Pharmaceutics, Marathwada Mitra Mandals College of Pharmacy, Thergaon, Pune - 411033, Maharashtra, India.

E-mail: mukeshparkhi@yahoo.co.in

ABSTRACT: Self-microemulsifying drug delivery system (SMEDDS) of Aceclofenac (ACE) was aimed at overcoming the problems of poor solubility. ACE is practically insoluble in water as a result it shows erratic oral absorption and affects the bioavailability. The formulation strategy included selection of oil phase based on saturated solubility studies and surfactant and co-surfactant screening on the basis of their emulsification ability. Ternary phase diagrams were constructed to identify the self-emulsifying region. Labrafac PG 8 (20%) as oil, Tween 80 (60%) as surfactant and Polyethylene glycol 400 (20%) as co-surfactant were concluded to be optimized components. The prepared SMEDDS was characterized through its droplet size, zeta potential, emulsification time and rheological determination. The optimized formulation exhibited 98.14 ± 0.34% *in vitro* drug releases, which was significantly higher than that of the drug solution. The study confirmed the potential of ACE SMEDDS for oral administration. It was concluded that the SMEDDS formulation approach can be used to improve solubility and dissolution of poorly water-soluble drugs such as ACE.

INTRODUCTION: Approximately, one third of the drugs emerging from drug discovery programs are poorly water soluble, presenting several problems when the pharmaceutical scientist developing formulations of such active pharmaceutical ingredients (API). Conventional oral dosage forms for poorly water soluble drugs present the drug in a solid form to the gastrointestinal tract which means the drug has to dissolve in the GI fluids before it can be absorbed. Thus, their rate and extent of absorption is largely dependent on the rate of dissolution. The formulation technique plays an important role in overcoming this short coming of poorly water soluble drugs.

According to the Biopharmaceutical Classification System (BCS), two classes of drugs show poor aqueous solubility namely BCS II and BCS IV. BCS II drugs possess poor aqueous solubility but have good permeation properties. BCS class IV drugs are poorly water soluble and poorly permeable. Developing a formulation for a class IV drug is nearly impossible unless the dose necessary is very small. Most of the times, such drugs are withdrawn at its lead optimization stage of drug discovery and reworked to improve its physicochemical properties.

QUICK RESPONSE CODE

DOI: 10.13040/IJPSR.0975-8232.9(9).1000-11

Article can be accessed online on: www.ijpsr.com

DOI link: http://dx.doi.org/10.13040/IJPSR.0975-8232.9(9).1000-11

CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.1251949

Available online at: http://www.iajps.com Research Article

STABILITY –INDICATING DENSITOMETRIC METHOD FOR SIMULTANEOUS DETERMINATION OF DONEPEZIL HYDROCHLORIDE AND CURCUMIN IN *INSITU* NASAL GEL

V.A. Ghodake, B.A.Agarwal, A.R. Tekade*

Rajashri Shahu College of Pharmacy and Research, Tathawade, Pune 411033; Marathwada Mitra Mandal'sCollege of Pharmacy, Thergaon, Pune 411033

Abstract:

A stability indicating high performance thin layer chromatography (HPTLC) method was developed and validated for determination of Donepezil hydrochloride and curcumin in in situ nasal gel. Study was performed on pre-coated silica gel HPTLC plates using toluene: methanol: glacial acetic acid (8: 2: 0.1 v/v/v) as the mobile phase. A TLC scanner set at 254 nm was used for direct evaluation of the chromatograms in the reflectance/absorbance mode. Method was validated according to ICH guidelines. The correlation coefficients of calibration curves were found to be 0.994 and 0.988 in the concentration range of 300–1800 and 120–720 ng band^{-1} for donepezil hydrochloride and curcumin, respectively. The method had an accuracy of 100.6 % for donepezil hydrochloride and 99.08% for curcumin. The method had the potential to determine these drugs simultaneously from dosage forms without any interference of the excipients. Donepezil hydrochloride and curcumin were also subjected to acid, base, oxidation, heat and photo-degradation studies. The degradation products obtained were well resolved from the pure drugs with significantly different R_f values. As the method could effectively separate the drugs from its degradation products, it can be used for stability-indicating analysis.

Keywords: *High-performance thin-layer chromatography, Donepezil hydrochloride and Curcumin, Stability-indicating method*

Corresponding author:

Dr. Avinash. R.Tekade,

Professor and Head of Department (Pharmaceutics),
Marathwada Mitra Mandal's College of Pharmacy,
Thergaon, Pune 411033,
Maharashtra, India.
Contact: 9371152536, 8208565514
Email: avitekade@gmail.com

QR code

Please cite this article in press Avinash. R.Tekade et al., ***Stability –Indicating Densitometric Method for Simultaneous Determination of Donepezil Hydrochloride and Curcumin in Insitu Nasal Gel,*** *Indo Am. J. P. Sci, 2018; 05(05).*

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Annals of Pharmacology and Pharmaceutics

Research Article
Published: 19 Jan, 2018

Atorvastatin Loaded Microsponges based Emu Oil Emulgel for Faster Wound Healing

Kuldeepsing D Rajput[1], Anil N Tankar[1] and Avinash R Tekade[2]*

[1]Department of Pharmaceutics, JSPM'S Rajarshi Shahu College of Pharmacy, India

[2]Department of Pharmaceutics, Marathwada Mitra Mandal's College of Pharmacy, India

Abstract

A micro sponge delivery system is patented, highly cross-linked, porous and polymeric in nature. Polymeric system consisting of porous microspheres that can entrap wide range of actives and then release them onto the skin over a time and in response to trigger. The fundamental appeal of the micro sponge technology overcome the problems of greasiness, stickiness associated with the conventional formulations in releasing active ingredients over an extended period of time that often result in lack of patient compliance. When applied to the skin, the MDS releases its active ingredient on a time mode and also in response to other stimuli (rubbing, temperature, pH, etc). Delivery system comprised of a polymeric bead having network of pores with an active ingredient held within was developed to provide controlled release of the active ingredients

Introduction

Micro sponge formulations have higher payload (50 to 60%), still free flowing and can be cost effective [1-3]. Microsponge scan be prepared by Emulsion solvent diffusion method and Suspension polymerization method.

Eudragits polymers are preferred to control the release of drug in formulation of microsponges by quasi emulsion solvent diffusion method. It is a copolymer of ethyl acrylate, methyl methacrylate, and a low content of Methacrylic acid ester with quaternary ammonium groups. As the polymer contains the ammonium salt groups, its permeability is pH independent [4]; Wound is defined as disruption of cellular, anatomical and functional continuity of a living tissue, produced by physical, chemical, thermal, microbial or immunological insult to the tissue [5]. A wound is colonized when growth and death of bacteria in the wound is balanced by the host. If the host is not able to keep the bacterial growth in balance, the wound will enter the infection phase (Bacterial load in excess of $10^{[5]}$). Symptoms for an infected wound are erythema, edema, warmth, pain and exudate. Infections of chronic wounds are often polybacterial with *Staphylococcus aureus* and anaerobs being the most common in chronic wound [6].

Wound healing is the interaction of a complex cascade of cellular and biochemical actions leading to the restoration of structural and functional integrity with regain of strength of injured tissues [5]. The healing of a wound is achieved by way of the integrated phases of haemostasis, inflammation, proliferation and remodeling. These phases must occur in the proper sequence and time period, without interference and at optimalintensity, in order for a wound to heal normally [7].

However, medical therapies for wound care are limited; therefore, development of new treatment modalities to improve wound healing in diabetic patients is an essential and emerging field of investigation [8]. Numerous conservative methods, such as honey as a dressing solution [9], topical antimicrobial therapies total contact casting [10], wound dressings [11] for the treatment of diabetic wounds have been reported in the literature. Herbal therapies were also reported [12]. In this study, a well-known agent. Atorvastatin is used for the treatment of wounds. It is reported that statins may be useful in the treatment of diabetic foot ulceration (DFU) [13]. Statins are widely used for the treatment of hyperlipidaemia, has been shown to prevent cardiovascular events in patients with diabetes. In addition to preventing macrovascular diseases, statins may also be able to retard the progression of microvascular complications of diabetes [14]. Statin drugs directly enhance the ability of endothelial nitric oxide synthase to generate nitric oxide in endothelial cells independent of lipid-lowering effects [15,16]. In animal studies, the use of statins on the vascular system, such as the coronary artery, cerebral artery, small mesenteric artery, aorta, and corpus cavernosum, was shown to result in vascular relaxation by up regulating nitric oxide synthase [16-18] Indeed,

OPEN ACCESS

Correspondence:
Avinash R Tekade. Department of Pharmaceutics, Marathwada Mitra Mandal's College of Pharmacy, India, Tel: 09371152536; E-mail: avitekade@gmail.com

Received Date: *23 Dec 2017*
Accepted Date: *12 Jan 2018*
Published Date: *19 Jan 2018*

Citation:
Rajput KD, Tankar AN, Tekade AR. Atorvastatin Loaded Microsponges based Emu Oil Emulgel for Faster Wound Healing. Ann Pharmacol Pharm. 2018; 3(1): 1139.

JOURNAL OF LIPOSOME RESEARCH
https://doi.org/10.1080/08982104.2018.1552703

Taylor & Francis
Taylor & Francis Group

RESEARCH ARTICLE

Nanostructured cubosomes in an *in situ* nasal gel system: an alternative approach for the controlled delivery of donepezil HCl to brain

Rahul P. Patil[a], Devlya D. Pawara[b], Chetan S. Gudewar[b] and Avinash R. Tekade[b]

[a]Department of Pharmaceutics, JSPM'S Rajarshi Shahu College of Pharmacy and Research, Pune, Maharashtra, India; [b]Department of Pharmaceutics, Marathwada Mitra Mandal's College of Pharmacy, Pune, Maharashtra, India

ABSTRACT

The purpose of this research was to develop cubosomal mucoadhesive *in situ* nasal gel to enhance the donepezil HCl delivery to the brain. Glycerol mono-oleate (GMO) and surfactant poloxamer 407 were used to prepare cubosomes. The developed formulations were characterized for particle size (PS), poly dispersity index (PDI), zeta potential (ZP), entrapment efficiency (EE), transmission electron microscopy (TEM), *in vitro* drug release and *in vivo* bio-distribution study in blood and brain tissue. Central composite design was used for the optimization purpose and the selected formulation (containing GMO 2 g and poloxamer 1.5%) was prepared in presence of gellan gum and konjac gum as gelling agent and mucoadhesive agent respectively. The optimal cubosomal dispersion and optimal cubosomal mucoadhesive in situ nasal gel were subjected to *in vivo* bio-distribution studies in rat model. It showed significantly higher transnasal permeation and better distribution to the brain, when compared to the drug solution. Thus, the formulated cubosomal mucoadhesive *in situ* gel could be considered as a promising carrier for brain targeting of CNS acting drugs through the transnasal route.

ARTICLE HISTORY
Received 9 May 2018
Revised 15 November 2018
Accepted 21 November 2018

KEYWORDS
Donepezil HCl; intranasal delivery; cubosomes; mucoadhesion; *in situ* gel; bio-distribution; brain targeting

1. Introduction

The incidence of central nervous system (CNS) diseases for example Alzheimer's, Parkinson's and Huntington's are expected to increase significantly in the twenty-first century (Sharma *et al.* 2014). Alzheimer's disease (AD) is characterized by synaptic loss and degeneration of cholinergic neurons in the cortex and other areas of the brain, which result in deficits in cholinergic transmission and acetylcholine (ACh) level. Cholinesterase inhibitors (ChEIs) catalyse the breakdown of AChE in synaptic cleft, thus enhancing ACh level to moderate AD (Yang *et al.* 2013) Alzheimer's disease (AD) is clinically characterized by progressive loss of memory, impaired judgment, altered decision making, apraxia resulting in complete brain failure and death (Muntimadugu *et al.* 2016). The global prevalence of Alzheimer's disease (AD) is approximately 25 million (Shadab *et al.* 2014). Thus, there is an increasing need of novel brain drug carriers for macromolecular drugs for the treatment of CNS disorder like AD.

Developing drug delivery system for CNS targeting is challenging task due to the presence of blood–brain barrier (Devkar *et al.* 2014). Numerous successful studies focusing on the nasal pathway for CNS drug delivery has been reported previously (Horvát *et al.* 2009). The blood–brain barrier (BBB) provides protection for the brain but hinders the treatment and diagnosis of neurological diseases because the drugs must cross the BBB to reach the lesions. The non-invasive nose-to-brain delivery has advantages over other routes of administration like circumventing first pass metabolism and blood brain barrier (BBB) thus providing a promising route for CNS targeting. The unique anatomic and physiologic properties of the olfactory region and trigeminal nerve provide both extracellular and intracellular pathways into the CNS that bypass the BBB (Serralheiro *et al.* 2015, Meng and Bi-Botti 2010). Thus, centrally acting drugs can be administered more effectively via nasal route using various carriers.

Numerous carriers such as liposomes, microspheres, nanoparticles are promising approaches to target CNS (Devkar *et al.* 2014) overcoming the problems of stability, low drug encapsulation, and residual solvent (Lehr 2000). Colloidal carrier system protects compound of interest in the nasal cavity from the degrading environment and promote their transport beyond nasal mucosa (Abdelrahman *et al.* 2015). Recently, researchers have considered cubosomes as a potential drug delivery system for CNS targeting in order to treat CNS disorders efficiently. Cubosomes (Cubs) are nanostructured liquid particles which are crystalline in nature consisting of bi-continuous lipid bilayers having the capacity to incorporate drugs of different physicochemical properties (Horvát *et al.* 2009, Morsi *et al.* 2014, Milak and Andreas 2015).

With the recent developments in the technology, experience and expertise in the area of nano-pharmaceuticals, cubosome-based systems are being actively pursued as potential alternatives to non-common systems such as liposomes and niosomes (Rarokar *et al.* 2016). Cubosomes are made up of a binary system of mono-olein and water, where

CONTACT Avinash R. Tekade avitekade@gmail.com Department of Pharmaceutics, Marathwada Mitra Mandal's College of Pharmacy, S. No 17, Sector 34, Thergaon, Pune, Maharashtra 411033, India

ISSN (Online): 0975-8232,
ISSN (Print): 2320-5148

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH
An International Journal published monthly
An Official Publication of Society of Pharmaceutical Sciences and Research

INDEXED IN Embase An Elsevier Product

STUDY OF FORCED DEGRADATION BEHAVIOUR OF A NOVEL PROTEASOME-INHIBITING ANTICANCER DRUG BY LC-MS AND DEVELOPMENT OF A VALIDATED STABILITY-INDICATING ASSAY METHOD

HTML Full Text

STUDY OF FORCED DEGRADATION BEHAVIOUR OF A NOVEL PROTEASOME-INHIBITING ANTICANCER DRUG BY LC-MS AND DEVELOPMENT OF A VALIDATED STABILITY-INDICATING ASSAY METHOD

Babita A. Agarwal* and Santosh V. Gandhi

Department of Pharmaceutical Chemistry, A.I.S.S.M.S College of Pharmacy, Kennedy Road, Pune - 411001, Maharashtra, India.

ABSTRACT: In the present study, comprehensive stress testing of Carfilzomib, a newly approved proteasome-inhibiting anticancer drug was carried out according to ICH guideline Q1A (R2). The drug was subjected to acid (0.1N HCl), neutral and alkaline (0.1N NaOH) hydrolytic conditions at 70 °C, as well as to oxidative decomposition at room temperature. Photolysis was carried out in 0.1N HCl, water and 0.1N NaOH at 40 °C. LC-PDA and LC-MS investigated the products formed under different stress conditions. The LC-PDA method that could separate all degradation products formed under various stress conditions involved a C18 column and a mobile phase comprising of ACN and phosphate buffer (pH 3). The flow rate and detection wavelengths were 1 ml/min and 220 nm, respectively. The developed method was found to be precise, accurate, specific and selective. It was suitably modified for LC-MS studies by replacing phosphate buffer with water, where pH was adjusted to 3.0 with formic acid. The drug showed instability in the solution state (under acidic, neutral, alkaline and oxidative stress conditions), but was relatively stable in the solid-state, except the formation of minor products under accelerated conditions. Primarily, maximum degradation products were formed in acid conditions, though the same were also produced variably under other stress conditions. LC-MS fragmentation studies characterized the products. Based on the results, a complete degradation pathway for the drug could be proposed. LC-ESI-MS/MS characterized the major stress degradation product, and its fragmentation pathway was proposed.

Keywords:
Carfilzomib, Stress degradation, Stability indicating assay method, LC-MS, Degradation pathway

INTRODUCTION: Stability testing is nowadays the key procedural component in the pharmaceutical development program for a new drug as well as new formulation.

Drugs undergo physicochemical degradation upon storage. Pharmaceutical companies perform forced-degradation studies (stress testing) during pre-formulation to help in the selection of compounds and excipients for further development, to facilitate in salt selection or formulation optimization, and to produce samples for developing stability-indicating analytical methods.

Thus, stability testing of a drug under various temperature and humidity conditions is indispensable during the drug development process.

A stability-indicating method is "a validated quantitative analytical procedure that can detect the changes with time in the pertinent properties of the drug substance and drug product." A stability-indicating method accurately measures the active ingredients, without interference from degradation products, process impurities, excipients, or other potential impurities. Stability testing guidelines issued by International Conference on Harmonization (ICH) and other international agencies [1, 2, 3, 4, 5] require the reporting, identification, and characterization of degradation products (DPs). Tandem Mass Spectrometry (MS^n) and LC coupled with Mass Spectrometry (LC-MS, LC-MS/MS) are becoming the most versatile techniques for characterization of pharmaceutical DPs and impurity profiling [6].

Carfilzomib (CFZ Fig. 1) marketed under the trade name Kyprolis, developed by Onyx Pharmaceuticals is an anti-cancer drug acting as a selective proteasome inhibitor. Chemically, it is (2S) -N-((S) -1 -((S) -4 -methyl-1-((R)-2-methyl oxirane -2 -yl) -1 -oxopentan -2 -ylcarbamoyl) -2-phenylethyl)-2-((S) -2 -(2-morpholinoacetamido) -4 -phenyl butanamido) -4 -ethylpentanamidea tetrapeptide epoxyketone and an analog of epoxomicin [7]. The U.S. Food and Drug Administration (FDA) approved it on 20 July 2012 for use in patients with multiple myeloma [8]. The epoxyketone moiety binds irreversibly to the N-terminal threonine of the chymotrypsin-like active site of the proteasome and disrupts its catalytic function [9]. Only two papers discuss LC-MS quantification of this drug in biological materials [10, 11] and one UHPLC-UV- method for CFZ or it's drug formulations [12] have been reported.

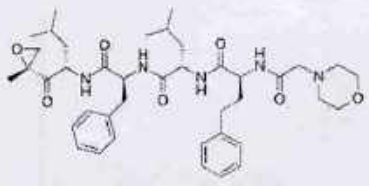


FIG. 1: STRUCTURE OF CARFILZOMIB

Article Details

POTENTIAL OF RP-HPLC-DAD-MS FOR THE QUALITATIVE AND QUANTITATIVE ANALYSIS OF DAPAGLIFLOZIN IN TABLETS AND DEGRADANTS

Agarwal B.[a]* and Gandhi S.[b]

[a] Marathwada Mitramandal's College of Pharmacy, Thergaon, Pune - 411 033, Maharashtra, India
[b] A.I.S.S.M.S. College of Pharmacy, Kennedy Road, Near RTO, Pune - 411 001, Maharashtra, India
* For Correspondence: E-mail - babita_a_agarwal@yahoo.co.in

ABSTRACT

Dapagliflozin is a new drug of the gliflozin class which inhibits subtype 2 of the sodium-glucose transport proteins (SGLT2). It is a recent drug in the market and the generic market may soon get flooded with it. Therefore, newer methods are required to control dapagliflozin in pharmaceuticals. In the present study, a new method based on RPHPLC coupled to DAD and MS was developed to validate the analysis of dapagliflozin in tablet dosage form. A wavelength of 222 nm was selected to perform a cost-effective quantification and the method showed adequate linearity, with an R2 value of 0.9998, and acceptable values of accuracy (75%–102%) and precision (residual standard deviation < 5%). The detection and quantification limits were 1.16 µg/mL and 0.53 µg/mL, respectively. Furthermore, the use of high-resolution MS enabled us to ensure the specificity, check impurities and better sensitivity. Therefore, this methodology promises to be suitable not only for the routine analysis of dapagliflozin in pharmaceutical dosage forms, but also for potential degradants.

Year 2018 | Volume No. 55 | Issue No.11 | Page No. 45-49

DOWNLOAD ARTICLE

Recent Issue

December 2020
Vol. 57, Num.12

November 2020
Vol. 57, Num.11

March 2021
Vol. 58, Num.3

April 2021
Vol. 58, Num.4

VI

Current Issue

May 2021

Quick Contact

+91 22 24974308 / 249

publications@idmaind

Subscribe IDMA bulletin

Email address

About Us | Past Issues | Current issue | Best Paper Awards | Articles Accepted | Instructions To Authors | Advertise with us | Editorial Board | Contact

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ISSN (Online): 0975-8232,
ISSN (Print): 2320-5148

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH
An International Journal published monthly
An Official Publication of Society of Pharmaceutical Sciences and Research

INDEXED IN Embase An Elsevier Product

DESIGN OF EXPERIMENT IN THE BIO-ANALYTICAL DETERMINATION OF QUETIAPINE FUMARATE IN HUMAN PLASMA BY A RP-HPLC METHOD

HTML Full Text

DESIGN OF EXPERIMENT IN THE BIO-ANALYTICAL DETERMINATION OF QUETIAPINE FUMARATE IN HUMAN PLASMA BY A RP-HPLC METHOD

Sampada D. Dalvi [*1], Rrabindra K. Nanda [2] and Sohan S. Chitlange [2]

Department of Pharmaceutical Chemistry [1], Marathwada Mitramandal's College of Pharmacy, Kalewadi, Pune - 411033, Maharashtra, India.

Department of Pharmaceutical Chemistry [2], Dr. D. Y. Patil Institute of Pharmaceutical Science and Research, Pimpri Pune - 411018, Maharashtra, India.

ABSTRACT: A new, simple, sensitive, accurate and precise RP-HPLC method was developed for the estimation of quetiapine fumarate in human plasma. Full factorial design was used for the optimization of an extraction method. The main effect of volume of deproteinating agent, speed of centrifugation, time of centrifugation and temperature of centrifugation was found to be significant at P<0.0001 on all the responses. After deproteinization, the drug was analyzed on a C18 (150 × 4.6mm, 5 µm) column using UV detector. The mobile phase consisting acetonitrile and phosphate buffer (pH 3) in the ratio of 50:50 (v/v) at a flow rate of 1.0 ml/min. The standard calibration curve was constructed in the concentration range of 5 µg/ml to 30 µg/ml and linearity was found to be 0.999. Irbesartan was used as the internal standard. The retention time of quetiapine fumarate and the internal standard was found to be 5.42 and 2.89 min, respectively. No interference peak was perceived. The high performance liquid chromatography method was successfully demonstrated as rapid and sensitive method which can be used as an alternative for the analysis of quetiapine fumarate in plasma samples.

Keywords:
Design of Experiment, RP-HPLC, Quetiapine fumarate, Validation, human plasma, extraction

INTRODUCTION: Quetiapine fumarate (QTF) is an atypical antipsychotic agent indicated for the treatment of schizophrenia and for the treatment of acute manic episodes associated with bipolar disorder. It is a selective monoaminergic antagonist [1]. However, this effect is mediated through anta-gonism of dopamine type 2 (D_2) and serotonin type 2 ($5HT_2$) receptors. QTF is a dibenzothiazepine derivative and is chemically 2, (2-[2-(4-Dibenzo [*b,f*] [1,4]thiazepin-11-yl-1-piperazinyl) ethoxy] ethanol) fumarate.

QTF belongs to the same family as clozapine and olanzapine, which are classified as a typical anti-psychotic and do not cause major extrapyramidal side effects. The generic name is Seroquel. It is white or almost white powder, moderately soluble in water and soluble in methanol and 0.1 N HCl. It is available in tablets form in dosage level of 25 mg, 50 mg, 100 mg, 200 mg, 300 mg and 400 mg. Maximum daily dosages is 800 mg in adults. This drug is rapidly absorbed after oral administration with peak plasma concentration attained within 1.50 hrs. Bioavailability of tablet formulation is 100% relative to an oral solution, which may be marginally affected by food. Plasma protein binding of QTF is 83 %. The drug is extensively metabolites, principally through CYP3A4. The drug is having half-life period of approximately 6 hours.

Quetiapine fumarate is not official in any pharmacopoeia [2]. Literature survey reveals that LC-MS/MS [3], LC-Electrospray-Tandem Mass Spectro-scopy [4], HPLC [5] methods have been reported for determination of QTF in human plasma. However, these existing methods involved multiple steps of extraction and expensive. Hence, there is a need to develop and validate a simpler, easier, faster yet economical new bio-analytical method for the extraction and estimation of quetiapine in plasma samples using HPLC with a UV detector. It is also necessary that the extraction process be simpler as rapid as possible. Although, the extraction process has been well established, it is affected by the choice of de-proteinizing agent used, volume of the extracting solvent, simplicity of the extraction and the protein separating process [3 - 4].

Furthermore, in the estimation process, short analysis time, sensitivity, robustness, precision, accuracy, sharpness of the peak and other economic aspects should be considered. These factors can be achieved with appropriate extraction conditions, appropriate buffer selection, pH and UV detector wavelength and flow rate, stationary and mobile phase. A slightly volatile buffer with a suitable pH should be used with respect to the pKa value of drug for appropriate elution, while composition of the mobile phase and flow rate should be adjustad to reduce the retention time [6].

The aim of the present study was to develop and validate a sensitive, simple, easy, fast, reproducible, precise and economical bio-analytical HPLC method for the estimation of QTF in human plasma. To achieve the aim of the present study, design of experiment (DOE) approach has been embraced for the statistical optimization of de-proteinizing agent, volume of de-proteinizing agent, centrifugation speed and time as a part of the extraction process. Further, the extracted drug samples were analysed with the newly developed and validated HPLC bio-analytical method.

Chemicals and Reagents: Active pharmaceutical ingredient (API) working standards of Quetiapine fumarate, was obtained as gift sample from Lupin Limited, Pune, India. HPLC grade acetonitrile, methanol and orthophosphoric acid were obtained from Merck, Mumbai, India Limited. HPLC grade water was obtained from Molychem, Thane, India. The blank human plasma was obtained from Blood bank (healthy human volunteer).

Instrumentation: The HPLC system (Cyberlab LC 100) consisting of binary gradient pump, micro-sorb-MV 100-5 C- 18 column (250 × 4.6mm, 5 µm), UV detector was employed for analysis. Chromatographic data was acquired using WS-100 Workstation software. Microsorb MV 100-5 C-18 column (150 mm × 4.6 mm, 5µm)

RJPT
Research Journal of Pharmacy and Technology

Research Journal of Pharmacy and Technology

ISSN
0974-360X (Online)
0974-3618 (Print)

Phytochemical and Pharmacognostical Evaluation of Milky Mangrove Excoecaria agallocha Linn (AbstractView.aspx?PID=2019-12-3-55)

Author(s): M. K. Shelar (search.aspx?key=M. K. Shelar), M. J. Patil (search.aspx?key=M. J. Patil), S. S. Bhujbal (search.aspx?key=S. S. Bhujbal)

Email(s): marutishelar@rediffmail.com (mailto:marutishelar@rediffmail.com)

DOI: 10.5958/0974-360X.2019.00216.6 (https://doi.org/10.5958/0974-360X.2019.00216.6)

Address: M. K. Shelar1*, M. J. Patil2, S. S. Bhujbal1
1Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune-411018. (MS), India.
2Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune – 411033. (MS) India.
*Corresponding Author

Published In: Volume - 12, Issue - 3, Year - 2019 (Issues.aspx?VID=12&IID=3)

Keywords: Excoecaria agallocha Linn. () Pharmacognostic evaluation () Phytochemical evaluation ()
Thin Layer Chromatography. ()

Cite this article:
M. K. Shelar, M. J. Patil, S. S. Bhujbal. Phytochemical and Pharmacognostical Evaluation of Milky Mangrove Excoecaria agallocha Linn. Research J. Pharm. and Tech. 2019; 12(3):

Download

Future Journal of Pharmaceutical Sciences
Volume 4, Issue 2, December 2018, Pages 215-219

Evaluation of anticonvulsant activity of the ethanolic extracts from leaves of *Excoecaria agallocha*

M.K. Shelar [a], M.J. Patil [b], S.S. Bhujbal [a], R.B. Chaudhari [a]

[a] Department of Pharmacognosy, Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research, Pimpri, Pune 18, India

[b] Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune 33, India

Received 31 October 2017, Accepted 13 June 2018, Available online 15 October 2018.

Check for updates

Show less

Outline | Share Cite

https://doi.org/10.1016/j.fjps.2018.06.002

Abstract

Ethnopharmacological relevance

Excoecaria agallocha is popularly known as 'Thillai' plant in the tamil language of the South India. Its uses are mentioned on the temple inscription of the Chidambaram Temple, Chidambaram, India which dates back to 2nd Century CE.

Aim

To investigate the anticonvulsant activity of ethanolic extract of leaves mangrove plant *Excoecaria agallocha*.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES

SJIF Impact Factor 6.647

Volume 7, Issue 1, 1263-1278 Research Article ISSN 2278 – 4357

SYNTHESIS AND EVALUATION OF SOME NOVEL BENZIMIDAZOLE AND QUINOLONE DERIVATIVES FOR THEIR ANTIFUNGAL AND ANTIDIABETIC ACTIVITY

Rekha Muluk[1]*, Prajakta Kothawade[1], Gauri Kulkarni[2] and Pramode Ingale[3]

[1]Department of Pharmaceutical Chemistry, RJSPM College of Pharmacy, Dudulgaon, Pune, Maharashtra, India-412105.

[2]Department of Pharmaceutics, RJSPM College of Pharmacy, Dudulgaon, Pune, Maharashtra, India-412105.

[3]Department of Pharmaceutical Chemistry, Marathwada Mitra mandal's College of Pharmacy, Thergaon (Kalewadi), Pune, Maharashtra, India- 411033.

Article Received on
09 November 2017,
Revised on 30 Nov. 2017,
Accepted on 21 Dec. 2017
DOI: 10.20959/wjpps20181-10831

***Corresponding Author**
Dr. Rekha Muluk
Department of Pharmaceutical Chemistry, RJSPM College of Pharmacy, Dudulgaon, Pune, Maharashtra, India-412105.

ABSTRACT

A series of novel benzimidazole and Quinolone derivatives have been synthesized and evaluated for antifungal and antidiabetic activity. The newly synthesized compounds have been characterized by IR, ^{1}H-NMR and elemental analyses. All the compounds have been found to promising antifungal activity when compared with standard drug Griseofulvin. All the compounds were screened for *in-vitro* anti-diabetic activity by α-glucosidase inhibitory action by different concentration like 150 µg/ml, 200 µg/ml by inhibition of α- glucosidase method. Acarbose was used as standard drug.

KEYWORDS: antifungal activity, antidiabetic activity, elemental analyses, Acarbose Griseofulvin, α-Glucosidase.

INTRODUCTION

Microbial infections have become more dreadful and dangerous so the search of new antibiotics and antibacterials is a continuous process in drug discovery. Fungal infections are termed mycoses which affect skin, nails, scalp, mucous membranes, deeper tissues and organs. The commonest systemic fungal infections are candidiasis, blastomycosis, histoplasmosis, coccidiomycosis and paracoccidiomycosis. Older people, diabetics, pregnant women and burn wound victims are all more prone to fungal infections.[1, 2]

Article PDF Available

Influence of Unani polyherbal formulation on learning and memory retention in mice

July 2018
DOI:10.29090/psa.2018.03.174

Authors:


Digambar Ambikar
University of Gondar


Eshetie Melese Birru
University of Gondar

Manohar Patil

Abstract

The drug discovery should not be always limited to discovery of a single molecule and current belief one disease one drug approach may be untenable in the future and that rationally designed polyherbal formulations could also be investigated as an alternative in multi-target therapies and prophylaxis. Considering this the influence of Unani Polyherbal Formulation (UPF) was investigated for its nootropic activity. To investigate nootropic activity of the UPF various experimental paradigms of learning and memory were used including transfer latency (TL) on elevated plus-maze, spatial memory evaluation using radial arm maze, passive avoidance response (PAS) and object recognition test. Mice were devided in four groups viz control i.e vehicle treated, UPF 200 mg/kg, UPF 400 mg/kg and piracetam 150 mg/kg as standard. The investigation reported that UPF 200 and 400 mg/kg significantly reduced the TL on 2nd and 9th day and significantly increased the step down latency in the PAS at acquisition and retention test. In radial arm maze task UPF 200 and 400 mg/kg showed significant decrease in the days to make the mice learned and latency to find food in reference as well as working memory. UPF also attenuated scopolamine induced memory deficit. Furthermore the UPF 200 and 400 mg/kg increased discrimination index in the object recogni- tion test indicating nootropic activity. To conclude UPF showed significant facilitatory effect on aversively motivated learning and memory in mice, spatial learning and memory and improvement of memory in absence of cognitive deficit.

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Original Article

Pharm Sci Asia 2
DOI : 10.29

Influence of Unani polyherbal formulation on learning and me

[1] *Department of Pharmacology, College of Medicine and Health Sciences, Unive Gondar, Gondar, Ethiopia.*
[2] *Department of Pharmacognosy, Marathwada Mitra Mandals College of Pha Thergaon (Kalewadi), Pune, India.*

ARTICLE INFO
Article history:
Received 8 October 2017
Received in revised form
20 January 2018
Accepted 29 January 2018

KEYWORDS:
Unani polyherbal formulation; Learning and memory; Memory impairment; Nootropic.

ABSTRACT

The drug discovery should not be always limited to d of a single molecule and current belief one disease one drug a may be untenable in the future and that rationally designed po formulations could also be investigated as an alternative i target therapies and prophylaxis. Considering this the i of Unani Polyherbal Formulation (UPF) was investigate nootropic activity. To investigate nootropic activity of t various experimental paradigms of learning and memory w including transfer latency (TL) on elevated plus-maze memory evaluation using radial arm maze, passive av response (PAS) and object recognition test. Mice were de four groups viz control i.e vehicle treated, UPF 200 mg/l 400 mg/kg and piracetam 150 mg/kg as standard. The inves reported that UPF 200 and 400 mg/kg significantly redu TL on 2nd and 9th day and significantly increased the ste latency in the PAS at acquisition and retention test. In ra maze task UPF 200 and 400 mg/kg showed significant d in the days to make the mice learned and latency to fi in reference as well as working memory. UPF also att scopolamine induced memory deficit. Furthermore the U and 400 mg/kg increased discrimination index in the object tion test indicating nootropic activity. To conclude UPF significant facilitatory effect on aversively motivated learn memory in mice, spatial learning and memory and impr of memory in absence of cognitive deficit.

1. INTRODUCTION

The nootropic drugs belong to the class of psychotropic agents with selective facilitatory effect on intellectual performance, learning and memory[1]. Dementia is a mental disorder characterized by loss of intellectual ability sufficiently severe as to interfere with one's occupational or social activities. Dementia is of several types and it invariably i impairment of memory. The most c cause of dementia is Alzheimer's diseas is a progressive neurodegenerative associated with loss of neurons in brain areas. The central cholinergic p play a prominent role in learning and processes[2]. Centrally acting antimuscarin

***Corresponding author:** pharmascholy@gmail.com

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S
COLLEGE OF PHARMACY
THERGAON, PUNE-411033

3.5.1. Number of Collaborative activities

Faculty Exchange-Training, Conferences, FDP, Seminars completed/attended by Faculty

Academic Year-2018-19

RAJIV GANDHI NATIONAL INSTITUTE OF INTELLECTUAL PROPERTY MANAGEMENT

MAHARASHTRA NATIONAL LAW UNIVERSITY, NAGPUR

WIPO

INTELLECTUAL PROPERTY

SUMMER SCHOOL

CERTIFICATE

We hereby certify that

Rahul Khiste

Successfully completed the

WIPO-INDIA SUMMER SCHOOL ON INTELLECTUAL PROPERTY

Organized by

the World Intellectual Property Organization (WIPO)

in cooperation with the

Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM), Nagpur

and

Maharashtra National Law University (MNLU), Nagpur

Nagpur, India

July 2 to 13, 2018

Pankaj P. Borkar
Head
RGNIIPM

Vijender Kumar
Vice Chancellor
MNLU, Nagpur

Sherif Saadallah
Executive Director
WIPO Academy

RGNIIPM/TC/2018-19/3002

Marathwada Mitra Mandal's College of Pharmacy, Estd. 2006, Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MITCON INSTITUTE OF MANAGEMENT

PHARMEET 2019

National Conference on

"Emerging Prospects in Pharmaceutical Industry"

This is to Certify that Mr./Ms. Babita Agarwal.

has attended conference as delegate during PHARMEET - 2019 organised by MITCON Institute Of Management on 9th Feb 2019.

Prof. Nitpal Singh
Deputy Director -PHM

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Dr. Ganesh Rao
Director

Marathwada Mitra Mandal's
College of Pharmacy
S. No. 4/17, Sector No. 34, PCNTDA
Thergaon (Kalewadi) Pune-411033

CIRCULAR

Date: 27/02/2019

All faculty members are hereby informed that the three days "Entrepreneurship awareness Camp (EAC)" is arranged on 28th February to 2nd March 2019 at our institute for Final year B Pharm and M Pharm (Sem-III, IV) students. All faculty members of Final Year B. Pharm and M. Pharm are requested to attend the program as per their academic schedule. The detailed schedule of the program is as:

Sr. No.	Date & Time	Venue	Resource Person
1	28th February - 2nd March 2019; Thursday, Friday & Saturday 9.30 am to 5.00 pm	Seminar Hall	Experts from Maharashtra Centre for Entrepreneurship Development. (MCED, Pune)

Dean
Training, Placement, III, E.D. Cell

Dr. Manohar J. Patil
(Principal)
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ART
PVK
BAA
SKJ
KNY
SAK
GSM
PNB
MSB
ASK

PJP
MPR
PHS
SDD
SSS
SG
SAS
RRN
ARN

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's

College of Pharmacy

S. No. 4/17, Sector No. 34, PCNTDA

Thergaon (Kalewadi) Pune-411033

CIRCULAR

Date: 25/02/2019

All faculty members are hereby informed that the three days "Entrepreneurship awareness Camp (EAC)" is arranged on 28th February to 2nd March 2019 at our institute for Final year B Pharm and M Pharm (Sem-III, IV) students. The detailed schedule of the same is as:

Sr. No.	Date & Time	Venue	Resource Person
1	28th February - 2nd March 2019; Thursday, Friday & Saturday 9.30 am to 5.00 pm	Seminar Hall	Experts from Maharashtra Centre for Entrepreneurship Development. (MCED, Pune)

Dean

Training, Placement, III, E.D. Cell

Dr. Manohar J. Patil

(Principal)

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ART
PVK
BAA
SKJ
KNY
SAK
GSM
PNB
MSB
ASK

PJP
MPR
PHS
SDD
SSS
SG
SAS
RRN
ARN

Estd. 2006 Marathwada Mitra Mandal's College of Pharmacy Thergaon, Pune-33

Estd. 2006 Marathwada Mitra Mandal's College of Pharmacy Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S

COLLEGE OF PHARMACY

Thergaon, Pune-411033

MMCOP

Bestowing Health & Happiness

। सेवेचे बहुलांचे हित ।

ENTREPRENEURSHIP AWARENESS CAMP (EAC)

Sponsored by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology, Govt. of India, New Delhi.

28th February to 02nd March 2019

In Coordination with Maharashtra Centre for Entrepreneurship Development(MCED, Pune) &
Training, Placement, III & E.D.Cell, MMCOP, Pune

....building Pharmacy Professionals through Education par Excellence

Estd. 2006

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ANNEXURE-II

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra
Dated, 28/02/2019 to 02/03/2019

PROGRAMME SCHEDULE

Date and Day	Session *	Subject / Topic	Faculty
1	2	3	4
28/02/2019 1st Day	I	Inauguration- Camp Objective, Why Entrepreneurship (general concepts)	Mr. Suresh Umap, Dr. Avinash Tekade
	II	Historical background-Indian values vis-à-vis Entrepreneur ship and the present	Mr. Pranjal Kale
	III	Identification of Business opportunities and Mechanisms of product selection	Mr. Hemant Bhagwat
	IV	Technology-assistance from R&D labs and other institutions on choice of technology etc	Mr. Pandit T. Gawade
29/02/2019 2nd Day	I	How to start a SSI unit (General concept about the Govt. formalities, rules & regulation, location, and different aspect of an industry.	Mr. Ashok Pattar
	II	Technical & commercial aspects of SSI unit (General concept only)	Mr. Vilas Bhargude
	III	Financial aspects of SSI unit including salient features of a project report	Mr. Sanjay Patil
	IV	Schemes of assistance and Support available from Govt. agencies, banks, financial institutions, SFCs etc	Mr. Pandit T. Gawade
02/03/2019... 3rd day	I	Creativity and business- the man behind the venture	Mr. Pranjal Kale
	II	Communication skills for better results in business	Dr. Rahul Khiste
	III	Industry Visit at Nulife Pharmaceuticals, Pune	Dr. Rahul Khiste, Mr. Ganesh Mhaske Mr. Amar Shelke,
	IV	Industry Visit at Nulife Pharmaceuticals, Pune	Dr. Rahul Khiste, Mr. Ganesh Mhaske Mr. Amar Shelke,

* = Each session is one hour fifteen minutes

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Head of Institution
Dr. Manohar J. Patil
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ANNEXURE-III

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra, Dated 28/02/2019 to 02/03/2019

LIST OF FACULTY / RESOURCE PERSON

Sr. No.	Name and Address	Design ation	Organisation
1	2	3	4
1	Mr. Suresh Umap, Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005	Regional Director	Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005
2	Mr. Pranjal Kale, Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra - 411005	Program Coordinator	Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005
3	Mr. Hemant Bhagwat, Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005.	Training Faculty	Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005
4	Mr. Sanjay Patil, Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra- 411005	Faculty	Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005
5	Mr. Pandit T. Gawade, Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra -411005	Faculty	Maharashtra Centre For Entrepreneurship Development (MCED), Pune University Rd, Narveer Tanaji Wadi, Shivajinagar, Pune, Maharashtra 411005
6	Mr. Ashok Pattar, Symbiosis International University, Pune	Faculty	Computer Studies - Symbiosis International University, Pune
7	Mr. Vilas Bhargude, Vipra Pharmaceuticals Pvt. Ltd. Village Bebadohal, Gat. No. 439, Taluka-Maval, Dist. Pune-410506	Director	Vipra Pharmaceuticals Pvt. Ltd. Village Bebadohal, Gat. No. 439, Taluka-Maval, Dist. Pune-410506
8	Dr. Rahul H. Khiste, Marathwada Mitra Mandals College of Pharmacy S. No. 4/17, Sector No. 34, PCNTDA Thergaon (Kalewadi) Pune- 411033	Dean, Training, Placement, III, & EDC	Marathwada Mitra Mandals College of Pharmacy S. No. 4/17, Sector No. 34, PCNTDA Thergaon (Kalewadi) Pune- 411033

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Head of Institution
Dr. Manohar J. Patil
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

ANNEXURE-I

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-411033, Maharashtra
Dated, 28/02/2019 to 02/03/2019

LIST OF PARTICIPANTS

Sr. No.	Name of Participant	Age	Male / Female	Education	Category: Gen / SC / ST / OBC / Minority
1	2	3	4	5	6
1	Anarase Sushma Kisan	21	Female	B. Pharm	OBC
2	Bhapkar Monika Dattatray	21	Female	B. Pharm	Open
3	Bhosale Neha Dilip	21	Female	B. Pharm	Open
4	Bhosale Nikita Sanjay	20	Female	B. Pharm	Open
5	Bhure Priyanka Rajendra	21	Female	B. Pharm	NTC
6	Biradar Avinash Chandrakant	21	Male	B. Pharm	Open
7	Bonude Rajshri Ramchandra	21	Female	B. Pharm	SC
8	Chavan Akshay Dayaram	21	Male	B. Pharm	DTVJ
9	Chole Dipti Ashok	20	Female	B. Pharm	NTD
10	Doke Nikita Kalyan	20	Female	B. Pharm	Open
11	Doke Pratiksha Parmeshwar	21	Female	B. Pharm	Open
12	Dongare Surabhi Subhash	21	Female	B. Pharm	OBC
13	Gaikwad Swapnali Dattatray	21	Female	B. Pharm	Open
14	Gargote Pragati Ganpat	20	Female	B. Pharm	Open
15	Giri Mohan Bhagwan	20	Male	B. Pharm	NTB
16	Giri Ravi Digambar	21	Male	B. Pharm	NTB
17	Gochade Dhanashri Devrao	21	Female	B. Pharm	NTC
18	Gore Diksha Tatyaram	21	Female	B. Pharm	Open
19	Hedaoo Akanksha Yogesh	21	Female	B. Pharm	SBC
20	Ighe Nikita Navnath	20	Female	B. Pharm	NTB
21	Ingole Payal Vikas	20	Female	B. Pharm	Open
22	Jagtap Mayur Madhukar	20	Male	B. Pharm	Open
23	Kadam Sonali Subhash	21	Female	B. Pharm	Open
24	Kalyankar Pandurang Gangadhar	21	Male	B. Pharm	Open
25	Kharate Shailesh Datta	21	Male	B. Pharm	SBC
26	Khopade Maya Sakharam	21	Female	B. Pharm	Open
27	Lawande Sneha Rajendra	21	Female	B. Pharm	Open
28	Madrewar Dhiraj Radheshyam	20	Male	B. Pharm	Open
29	Mandale Vijaya Ramdas	20	Female	B. Pharm	Open
30	Mane Nagnath Marotrao	21	Male	B. Pharm	NTC
31	Mittha Pradeep Sadanand	21	Male	B. Pharm	OBC
32	Mokashe Gorakhnath Bhagwan	20	Male	B. Pharm	NTB
33	Mule Kiran Baburao	21	Female	B. Pharm	Open
34	Musale Shubham Rajendra	21	Male	B. Pharm	OBC
35	Nahire Neha Ravindra	21	Female	B. Pharm	OBC
36	Patil Sandhya Ranjitsing	21	Female	B. Pharm	Open
37	Patwari Ajay Chandrakant	21	Male	B. Pharm	Open
38	Pawar Mayuri Deelip	20	Female	B. Pharm	SC
39	Pisal Charushila Sopan	20	Female	B. Pharm	Open
40	Pote Aniket Balasaheb	20	Male	B. Pharm	SC
41	Poul Ravi Baburao	20	Male	B. Pharm	Open
42	Rathod Mayuri Parashuram	21	Female	B. Pharm	DTVJ
43	Salunke Rupesh Ramrao	21	Male	B. Pharm	Open
44	Sathe Sayali Rajendra	21	Female	B. Pharm	Open
45	Shedge Madhavi Mangesh	21	Female	B. Pharm	Open
46	Shinde Asawari Shivaji	20	Female	B. Pharm	Open
47	Shinde Uday Kisan	21	Male	B. Pharm	Open
48	Shinde Varsha Manohar	21	Female	B. Pharm	Open
49	Sontate Pragati Shamrao	21	Female	B. Pharm	SC
50	Sutar Rajeshri Devanand	21	Female	B. Pharm	OBC

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Sr. No.	Name of Participant	Age	Male / Female	Education	Category: Gen / SC / ST / OBC / Minority
1	2	3	4	5	6
51	Tambe Pratima Sudhir	20	Female	B. Pharm	Open
52	Tamboli Asim Maula	21	Male	B. Pharm	OBC
53	Thosar Ashwini Vinod	21	Female	B. Pharm	OBC
54	Wagh Sukanya Dipak	21	Female	B. Pharm	Open
55	Yele Tai Pandurang	20	Female	B. Pharm	NTC
56	Bodke Prameshwar Panditrao	24	Male	M. Pharm	Open
57	Holkar Shekhar Sanjay	23	Male	M. Pharm	Open
58	Jawanjal Pranay Ashokrao	24	Male	M. Pharm	OBC
59	Khemnar Rameshwar Raosaheb	22	Male	M. Pharm	NT-2C
60	Saruk Pranjali Tejaraj	22	Female	M. Pharm	Open
61	Tupekar Komal Bhagwan	24	Female	M. Pharm	OBC
62	Yadav Jyoti Narayan	22	Female	M. Pharm	Open
63	Ambekar Aishwarya Sandeep	23	Female	M. Pharm	OBC
64	Patil Nikhil Vikas	23	Male	M. Pharm	Open
65	Shinde Sanket Pandurang	25	Male	M. Pharm	OBC
66	Waghmare Pooja Jitendra	23	Female	M. Pharm	SC
67	Mehetre Komal Chandrakant	25	Female	M. Pharm	OBC
68	Andhale Rutuja Sarjerao	21	Female	M. Pharm	NT-3D
69	Dixit Abhishek Sunil	22	Male	M. Pharm	Open
70	Janjire Vaibhav Murlidhar	21	Male	M. Pharm	Open
71	Jawale Gayatri Kailas	21	Female	M. Pharm	Open
72	Karnawat Gayatri Rajendrakumar	21	Female	M. Pharm	Open
73	Nagpurkar Shweta Vilas	21	Female	M. Pharm	SBC
74	Nimmnawad Mahesh Madhav	22	Female	M. Pharm	NT-1B
75	Surve Aniketh Bhagwan	22	Male	M. Pharm	Open
76	Pawar Shubham Satish	21	Male	M. Pharm	Open
77	Bhapkar Nilkanth Dattatarya	21	Male	M. Pharm	Open
78	Nikam Aniket Sanjay	21	Male	M. Pharm	Open
79	Rayate Rushikesh Shivaji	21	Male	M. Pharm	OBC
80	Maske Shivraj Vitthal	21	Male	M. Pharm	Open
81	Bokhare Suraj Ramesh	21	Male	M. Pharm	Open
82	Somvanshi Aniket Balkrishna	21	Male	M. Pharm	OBC

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Head of Institution
Dr. Mahohar J. Patil
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra

PROFORMA FOR POST PROGRAMME REPORT (PPR) OF EAC

1.	**Name & Address of Programme Implementing Agency** *(with Tel/ Fax /E-mail)*	: Marathwada Mitra Mandal's, College Of Pharmacy,S. No. 4/17, Sector No. 34. PCNTDA,Off Kalewadi Phata, Pimpri Road, Kalewadi (Thergaon), Pune – 411 033. Maharashtra. Tel- 8446060841 E. Mail-mmcopharm@yahoo.co.in
2.	**Programme Location**	: Seminar Hall of Marathwada Mitra Mandal's, College of Pharmacy, Pune.
3.	**Programme Date**	: From 28/02/2019 to 02/03/2019
4.	**Name of the Coordinator**	: Dr. Rahul H. Khiste
5.	**No. of candidate attended the programme**	: 82 (Male-34 Female-48)
6.	**List of participants**	: ***ANNEXURE – I***
7.	**Program schedule**	: ***ANNEXURE – I I***
8.	**List of resource persons**	: ***ANNEXURE – III***
9.	**List of industries visited**	: ***ANNEXURE – IV***
10.	**Participant's feedback**	: ***ANNEXURE – V***
11.	**Photographs of Programme**	: Attach one group photo, one classroom photo and one industry/institute visit photo

Programme Coordinator
Dr. Rahul H. Khiste,
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Head of Institution
Dr. Manohar J. Patil
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra, Dated 28/02/2019 to 02/03/2019

Photographs of Programme

Marathwada Mitra Mandal's College of Pharmacy • Estd. 2006 • Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy • Estd. 2006 • Thergaon, Pune-33

DST – NIMAT PROJECT-2018-19

Entrepreneurship Awareness Camp conducted at Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, Pune-411033, Maharashtra, Dated 28/02/2019 to 02/03/2019

Photographs of Programme

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY,

THERGAON, PUNE-411 033 (M.S)

2015-2016

Recent Pat Drug Deliv Formul. 2017;11(1):28-35. doi: 10.2174/1872211311666170105114459.

Development and Evaluation of Naproxen Sodium Gel Using Piper cubeba for Enhanced Transdermal Drug Delivery and Therapeutic Facilitation

Sunetra Patwardhan [1], Manohar Patil [2], Anbazhagan Sockalingam [3]

Affiliations

Affiliations

1. Sinhgad College of Pharmacy, 44/1, Vadgaon (Bk), Off Sinhgad Road, Pune- 411041, Maharashtra, India.
2. Department Pharmacognosy, Marathwada Mitramandal College of Pharmacy, Pimpri, Pune, India.
3. Department of Pharm. Chemistry, Surya School of Pharmacy, Surya Nagar, GST Road, Vikravandi, Villupuram Dist., Tamil Nadu, India.

PMID: 28056749 DOI: 10.2174/1872211311666170105114459

Abstract

Background: The absorption of drug through skin avoids many side effects of oral route like gastric irritation, nausea, systemic toxicity etc and thus improves patient compliance. Naproxen sodium (NPRS) is one of the potent NSAID agents.

Objective: The present study was aimed to develop and evaluate the gel formulation containing NPRS for transdermal drug delivery reducing the side effects and improving patient compliance. The patents on topical delivery of NSAIDS (US 9012402 B1, US 9072659 B2, US 20150258196 A1) and patents indicating use of herbal penetration enhancers (US 20100273746A1, WO 2005009510 A2, US 6004969 A) helped in selecting the drug, excipients.

Method: Current protocol employs various extracts of Piper cubeba fruit to evaluate its role in absorption of NPRS. Various batches containing 1% NPRS and varying concentrations of synthetic permeation enhancers or the extracts were formulated in carbopol gel. Gel was evaluated for parameters like organoleptic parameters, pH, viscosity and spreadability. An ex-vivo percutaneous absorption of NPRS from gel was investigated and compared with best performing synthetic enhancer, transcutol P (TP).

Result: The batch containing 2% n-hexane extract (NHE) of Piper cubeba showed higher permeation than TP and Chloroform (CE), Methanolic (ME) and aqueous (AE) extracts as well. It showed improved % cumulative release (85.09%) and flux (278.61µg/cm2.h), as compared to TP and other extracts. Histopathology indicated the formulation safer as compared to that with synthetic enhancer.

Conclusion: It suggests P. cubeba as effective and safer tool for transdermal delivery and acts as therapeutic facilitator for naproxen. GC-MS analysis indicates lignans & terpenes in NHE to which

International Journal of Life science & Pharma Research

SOLUBILITY ENHANCEMENT OF POORLY WATER SOLUBLE DRUG USING NATURAL CARRIER

RATNAPARKHI M.P.[1]*, CHAUDHARI P.D.[2]

*[1]Marathwada Mitra Mandal's College of Pharmacy, Thergaon (Kalewadi), Pune-411033, India.
[2]PES Modern College of Pharmacy, Nigdi, Pune -411044, India.

ABSTRACT

Atorvastatin calcium is a synthetic lipid-lowering agent. Atorvastatin (ATR) is an inhibitor of 3-hydroxy-3-methylglutaryl-coenzyme A (HMG-CoA) reductase. This enzyme catalyzes the conversion of HMG-CoA to mevalonate, an early and rate-limiting step in cholesterol biosynthesis. According to the biopharmaceutical classification, ATR comes under Class II (low solubility and high permeability). Because of the limited aqueous solubility, it exhibits dissolution rate limited oral absorption. The objective of this investigation was to improve the solubility of the poorly water soluble drug atorvastatin, using solid dispersion (SD) techniques, with Aegel marmelos Gum (AMG) as a hydrophilic carrier. The effect of two variables related to solid dispersions preparation (drug to carrier ratio and method of preparation) were investigated. All the SDs prepared by Microwave induced fusion and Lyophilisation techniques showed remarkable increase in the solubility compared to the pure ATR.The solubility analysis demonstrated highest increase in the solubility of drug observed with ATR-AMG ratio 1:1 by lyophilisation technique. During In Vitro study result obtained that the SD prepared using the Lyohilisation method containing 1:1 ATR-AMG ratio displays faster dissolution rates compared with those prepared using the other that is 98.8±0.09% drug release within 90 min. The SD was characterized using DSC and XRD technique.

Keywords: Atorvastatin Calcium, Lyophilisation, Microwave, Solid Dispersion

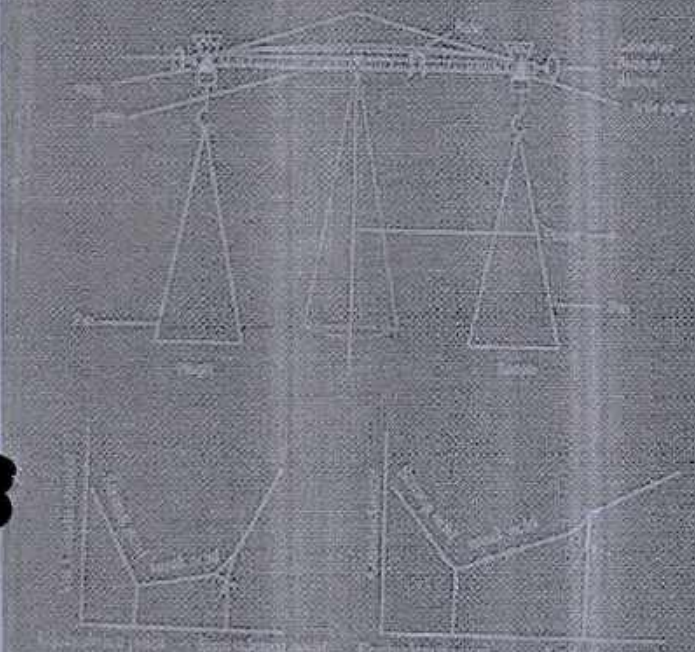
INTRODUCTION

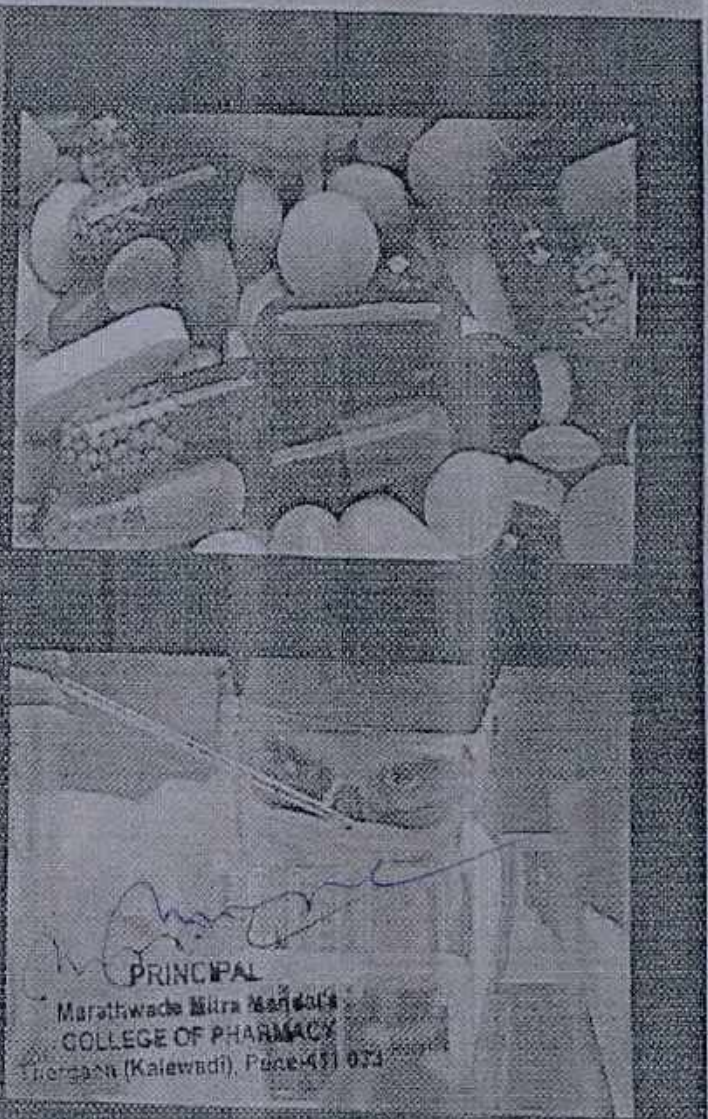
In recent years, the formulation of poorly soluble compounds presented interesting challenges for formulation scientists in the pharmaceutical industry. Up to 40% of new chemical entities discovered by the pharmaceutical industry are poorly soluble or lipophilic compounds, which lead to poor oral bioavailability The enhancement of oral bioavailability of poorly water soluble drugs remains one of the most challenging aspects of drug development. Atorvastatin (ATR) is a synthetic lipid-lowering agent.[1-3] Atorvastatin is an inhibitor of 3-hydroxy-3-methylglutaryl-coenzyme A (HMG-CoA) reductase. This enzyme catalyzes the conversion of HMG-CoA to mevalonate, an early and rate-limiting step in cholesterol biosynthesis. According to the biopharmaceutical classification, ATR comes under Class II (low solubility and high permeability). Because of the limited aqueous solubility, it exhibits dissolution rate limited oral absorption.[10, 11, 12] Solid dispersion (SD) techniques have been used to enhance the dissolution and oral bioavailability of many poorly water soluble drugs.[4, 5] To overcome the solubility problem, many authors formulated solid dispersions using number of various polymers and methods. In spite of tremendous research activity on solid dispersions since 1961, their commercial application is limited. Only a few products have been marketed so far.[6, 7, 8, 9] One aspect of solid dispersion technology on which most workers in the field would agree is that the number of marketed products arising from this approach has been disappointing. Research for alternative carriers has been increasing to suit for the industrial applications as well as to reduce the production cost and toxic effects. Recently, many natural polymers have been evaluated for their uses in formulation of solid dispersion. Cost effective pharmaceutical excipients are always desirable.[13,14] Pharmaceutical excipients developed from natural

TEXT BOOK OF

EXPERIMENTAL PHARMACEUTICAL ANALYSIS

V. S. Kasture
Pramod L. Ingale





CAREER
Publications
www.careerandyou.com

About the Book

The book Experimental Analysis covers classical methods of analysis. These methods started the discipline of chemical analysis both qualitatively & quantitatively, which includes gravimetric and volumetric methods of analysis. In gravimetry, the stoichiometry of analysis is stated. All calculations based on chemical equivalence are explained with specific examples. The gravimetric method is not very sensitive in terms of percentage purity determination, but it is a specific method for qualitative analysis.

The Volumetric methods are sensitive analytical methods compared to gravimetry. Volumetric methods are of four categories based on chemical reactions. Aqueous & Non-aqueous acid-base titrimetric methods, Complexometric methods which covers complex-forming reactions, both insoluble (precipitation) & soluble complex-forming reactions and Redox reactions, i.e. Reduction- Oxidation titrimetry. All volumetric methods of analysis are based on stoichiometry of the reactions between titer and titrant. Volumetry is a more sensitive and selective method of analysis of 20th century. In volumetric methods, the chemical compounds called Indicators are used to indicate completion of chemical reactions.

Further development in Volumetric methods of analysis was Instrumental methods, where all these titrations were performed using instruments. Quantitative parameters for analysis of chemical constituents are potential, conductance, pH, current. All electrical instruments are designed to quantify analyte in terms of these parameters based on Ohms law. Experiments based on analysis of samples by potentiometry, conductometry and PH metry are discussed.

Further development in chemical analysis is Spectroscopy where trace amounts of sample is analysed. Spectroscopy is method of choice for analysis of biological samples. Experiments based on both absorption & emission spectroscopical methods of analysis are discussed.

Complex mixtures are first fractionated for smooth analysis. Initially, extraction of sample with various solvents was the method of choice for separation of chemical constituents, but complex mixtures are resolved by Chromatography. Various chromatographic methods of separation and analysis are discussed with suitable experiments. Introduction to advanced methods like High Performance Liquid Chromatography, (HPTLC) High Performance Thin Layer Chromatography are discussed with experiments.

Infra Red Spectroscopy with analytically important group frequencies for organic functional groups are stated. Differential Scanning Calorimetric method for Pharmaceutical analysis are discussed with suitable examples.

The book is very informative for all science branches, especially under graduate & post graduate students not only for pharmacy students but of analytical chemistry.

About the Author

Prof. V. S. Kasture has 30 yrs of teaching experience in Pharmaceutical Analysis at various levels, which includes, lecturer, Associate Professor to Professor. The experiment written in this book have been performed in the laboratories of Pharmaceutical Sciences. The experiments are explained in simple language with suitable examples and graphical presentations.

This is the second book written by the author, the first being Spectroscopy, which covers advanced analytical methods of analysis, like UV-Visible, IR, NMR, & Mass Spectroscopy for structural elucidation of organic molecules and also problems based on the same.

At present, the author is founder member and Director of Pinnacle Biomedical Research Institute, Bhopal (MP), popularly known as PBRI (Visit www.pbri.in). PBRI is the first institute in India which extends instrumental, chemical, biological and microbiological facilities for Post Graduate and Doctoral students to pursue research.

The author has Completed research projects funded by UGC, AICTE, and Industries. She has guided more than hundred Post-graduate students and seven doctoral students for extraction, isolation & confirmation of structure of Phytoconstituents like Steroids, Triterpenoids, Flavonoids, Alkaloids, Iridoid type Glycosides, Fatty acids & Tannins. Her research has been recognised by several indexing agencies like, Google Scholar, Research Gate, Academia.edu, Pubmed-NCBI, Pubfacts, Semantic Scholar, etc.

She has published more than 100 research papers and has received more than 950 citations. She has collaboration with COSMESE of University of Caghari, Italy, and Banasthali University, Rajasthan. She had visited the Government University of Gondar, Ethopia, in 2016.

DR. PRAMOD L. INGALE is working as a Professor and Head of Department of Pharmaceutical Chemistry, at Marathwada Mitra Mandal's College of Pharmacy, Thergoan, Pune. He has graduated and post graduated in Pharmaceutical Chemistry as a specialization from Savitribai Phule Pune University, Pune and got his Ph. D. in Pharmaceutical Sciences from JNT University, Hyderabad. He has total 15 years of teaching experience and has guided 21 M. Pharm. students. He has published total 25 research papers in peer-reviewed national and international journals and presented 23 research papers in national and international conferences. He has received total Rs. 4.80 lakhs of research grant from Savitribai Phule Pune University, Pune. He has successfully completed few industry-sponsored projects in the capacity of co-investigator. His area of research are in SAR based drug designing, heterocyclic chemistry, Multicomponent reactions, Analytical Method Development and Validation, Stability indicating methods for bulk drugs and their various formulations. He is a member of APTI.

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon, Kalewadi, Pune-411 033

Estd. 2006

Text Book
CAREER
Publications
www.careerandyou.com

Text Book of Experimental Pharmaceutical Analysis

First Edition

ISBN 978-93-82322-59-7

9 789382 322597

Price ₹ 210.00

Dr. Ritesh P. Bhole
M. Pharm, PhD, DBM
Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune.

[illegible]

Dr. Pramod L. Ingale
M. Pharm, PhD.
Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune.

[illegible]

Mr. Yogesh B. Zambare
M. Pharm.
Dr. D. Y. Patil Institute of Pharmaceutical sciences and Research, Pimpri Pune.

[illegible]

Mr. Amit S. Tapkir
M. Pharm. (Pharmaceutical Chemistry)
Modern College of Pharmacy, Nigdi, Pune.

[illegible]

ISBN : 978-93-[illegible]

SUCCESS PUBLICATIONS

Address : Radha Krishna Apartment, 535, Shaniwar Peth, Appa Balwant Chowk, Opp. Prabhat Theatre, Pune - 30.
Ph. No. 24433374, 24434662, 6401289, Mobile [illegible]
E-mail : sharpgroup31@rediffmail.com
Website : www.sharpmultinational.com

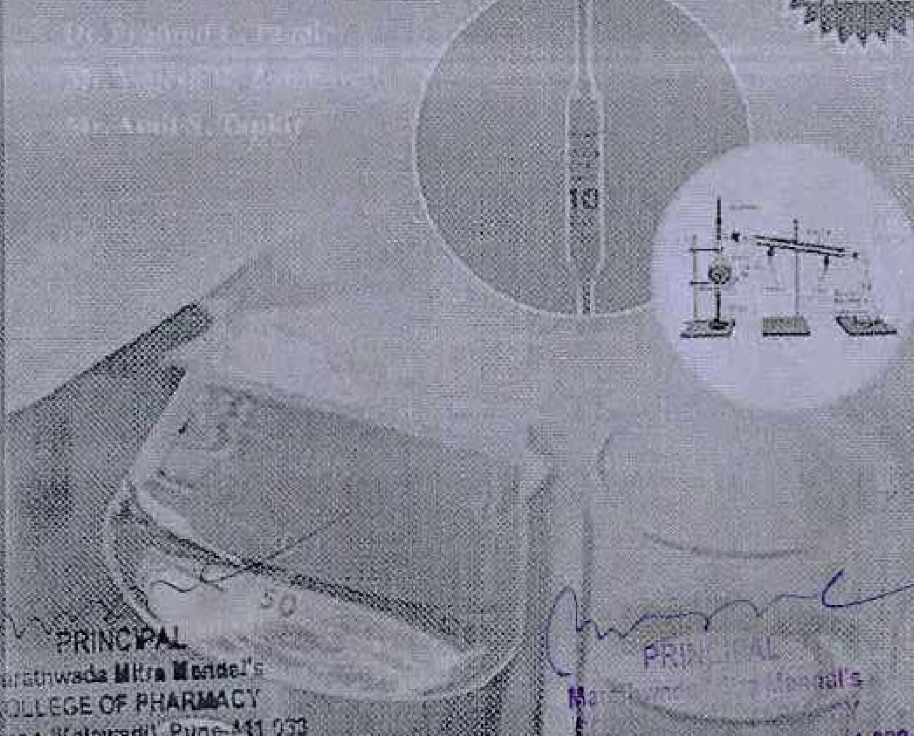
Practical Handbook of

PHARMACEUTICAL ORGANIC CHEMISTRY-IV

S.Y.B.Pharm. (Sem. - IV)

As Per New Syllabus

Dr. Ritesh P. Bhole
Dr. Pramod L. Ingale
Mr. Yogesh B. Zambare
Mr. Amit S. Tapkir



PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
[illegible] (Kalewadi), Pune-411 033

SUCCESS PUBLICATIONS

Dr. Ritesh P. Bhole
M. Pharm, PhD, DBM
Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune.

Dr. Ritesh P. Bhole Presently working as a Assistant professor, in department of Pharmaceutical Chemistry, in Dr. D. Y. Patil Vidya Pratishthan Society's Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research Pimpri, Pune. He has 12 years of experience in teaching and research in pharmacy. He has 27 publications in national and international journals and 25 Presentations to his credit. He has also received "Best Publication Award in Drug Design and Discovery" by V-Life Sciences in the year 2015. He also received research grant from AICTE New Delhi worth Rs. 20 Lakhs under Research Promotion Scheme. He had guided 09 M. Pharm students and currently 02 students are working under his guidance. He is also working as a Part of a drug discovery program for anticancer agents, Initiated by from MERCK Serono, Germany. He is on the Editorial Board on reputed Pharmaceutical Journals such as Pharmacologia, UK, Analytical Chemistry Insights, New Zealand, and Journal of Pharmaceutical Chemistry and Analytics, India etc. He is also Rated as Expert reviewer for Scientific Reports, London, UK. He is a member of Asian Council for Scientific Fellows, American Institute of Science and life member of APTI and MSPC.

Dr. Pramod L. Ingale
M. Pharm, PhD.
Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune.

Dr. Pramod L. Ingale is working as a Professor and Head Department of Pharmaceutical Chemistry at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune. He has graduated and post graduated in Pharmaceutical Chemistry as a specialization from Savitribai Phule Pune University, Pune and Ph. D. in Pharmaceutical Sciences from JN University, Hyderabad. He has total 15 years of teaching experience. He has guided 21 M. Pharm. students. He has published total 25 research papers in peer reviewed National and International journals and Presented 23 research papers in National and International conferences. He has received total Rs. 4.30 lakhs of research grant from Savitribai Phule Pune University, Pune. He has successfully completed few industry sponsored projects in the capacity of co-investigator. His area of research are in SAR based drug designing, heterocyclic chemistry, Multicomponent reactions, Analytical Method Developments and Validation, Stability indicating methods for bulk drugs and their various formulations. He is a life member of APTI.

Mr. Yogesh B. Zambare
M. Pharm.
Dr. D. Y. Patil Institute of Pharmaceutical sciences and Research, Pimpri Pune.

Mr. Yogesh B. Zambare is presently working as an Assistant professor in department of Pharmaceutical Chemistry at Dr. D. Y. Patil Institute of Pharmaceutical sciences and Research, Pimpri Pune. He has 6 year experiences in teaching and research. He has published 05 review and research article in various National and International journal of repute. He has presented various papers in National and International conventions, Seminars, conferences. He is a life member of APTI and MSPC.

Mr. Amit S. Tupkir
M. Pharm. (Pharmaceutical Chemistry)
Modern College of Pharmacy, Nigdi, Pune.

Mr. Amit S. Tupkir has an excellent academic background. He has almost 5 years of teaching experience. He is currently working as Assistant Professor in Department of Pharmaceutical Chemistry in Modern College of Pharmacy, Nigdi, Pune. He has vast and rich knowledge in the field of Pharmaceutical Organic Chemistry I and II, Medicinal Chemistry, Pharmaceutical Analysis, Advanced Analytical Techniques, Drug Design. He has showed his vigorous contribution in Paper Presentation at National and International Level. He has many of them get published too. He is Life Member of APTI.

ISBN : 978-93-24457-09-8

PT-1917

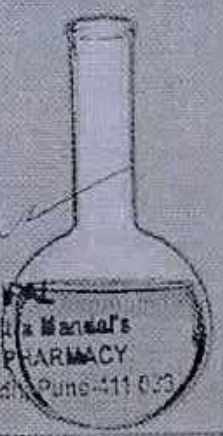
SUCCESS PUBLICATIONS

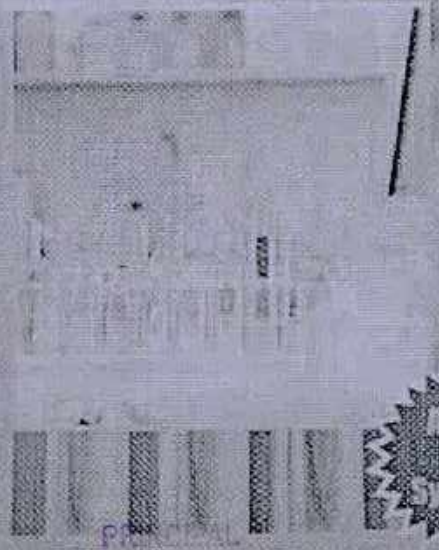
Address : Nisha Kel and Apartment, 515, Shanker Path, Appa Balwant Chowk, Opp. Prabhat Theatre, Pune - 30.
Tel. No. : 24433274, 24468662, 64015389, Mobile : 9850315464
E-mail : sharpgroup41@rediffmail.com
Website : www.sharpgroupinternational.com

Practical Handbook of

PHARMACEUTICAL ORGANIC CHEMISTRY - III

S. Y. B. Pharm. (Sem. - III)





Is As Per New Syllabus

SUCCESS PUBLICATIONS

View PDF

Full Factorial Design for Optimization, Development, Validation of RPHPLC Method and Stability-Indicating Method for Tamsulosin and Dutastaride

Sampada D. Dalvi[1*], Rabindra K. Nanda[2], Sohan S Chitlange[2]

[1]Marathwada Mitramandal's College of Pharmacy, Kalewadi, Pune, Maharashtra India 411033.

[2]Dr. D. Y. Patil Institute of Pharmaceutical Science and Research, Pimpri Pune, Maharashtra India 411018.

*Corresponding Author E-mail:**sampadadalvi17@gmail.com**

ABSTRACT:

High performance liquid chromatographic method was optimized developed and validated as per the ICH guidelines. Full factorial design was used to optimize the effect of variable factors. Full factorial design was used during forced degradation experiments and the factors/combination of factors which were most likely to affect degradation under various conditions was identified and was optimized further. In this study the methanol: water in the 80:20 ratios were used as mobile phase for the analysis. Drugs were exposed to acid, alkali and oxidation effect by hydrogen peroxide, dry heat, wet heat and photolytic conditions. The retention time values of tamsulosin and dutastaride were found to be 1.9min and 7.94 min respectively. Percent recovery in terms of accuracy was found in the range of 96.7–102.9%. Drugs were found to be stable under wet heat, dry heat and photolytic conditions, but substantial degradation was observed under acid, alkali and oxidative conditions. The method was found to be simple and fast by making use of experimental design.

KEYWORDS:HPLC, Dutastaride, Tamsulosin, Stability indicating method Full factorial Design.

INTRODUCTION:

The method for the analysis of drug in the formulation should be robust, sensitive and precise; hence, in this method design of experiment has been applied to study the effect of factors individually and in combination also. Design of experiment (DOE) is based upon the principles of experimental design, mathematical equations or models and outcomes of the factors. This research article focuses on the optimization, development and validation of a new analytical method with DOE[1, 2].

Forced degradation/stress testing, defined as the stability testing of drug substance and drug product under conditions exceeding those used for accelerated testing. From a drug development and regulatory perspective, forced degradation studies provide data for the identification of possible degradation products, prediction of degradation pathway, validation of stability-indicating analytical procedures, identification of conditions in which the drug is less stable, the choice of packing material and selection of storage conditions. Although the regulatory guidance documents define the concept of stress testing, they do not provide detailed information about a stress testing strategy. The experimental conditions to conduct stress testing are described in a general way and the exact stress conditions to be applied are not described. Researchers have suggested that degradation can be achieved by exposing the drug, for extended periods of time, to extremes of pH (aqueous, hydrochloric acid or sodium hydroxide solutions) at elevated temperatures, to hydrogen peroxide at room temperature or to UV light and to dry heat (in an oven) while adopting trial and error approach to select the strength, temperature and time of exposure to the stress conditions so as to achieve degradation to an extent of 10–20%, actually. Such trial and error approach are cost, time and labor intensive and should be substituted by more systemic approach[3, 4]. One such systemic approach is to adopt statistical nested design like factorial design to reveal the variables (strength, temperature or time of exposure) which are most likely to influence degradation and modify only these parameters to effect the adequate degradation.Dutasteride (DUT) is a synthetic 4-azasteroid compound that is a competitive and selective specific inhibitor of both type 1 and type 2 isoforms of steroid 5-α reductase (5AR), an intracellular enzyme that converts testosterone to 5-α dihydrotestosterone (DHT) whereas Tamsulosin (TAM) is α_{1a}-selective alpha blocker which work by relaxing bladder neck muscles and muscle fibers in the prostate itself and make it easier to urinate[5- 9]. In this work, an analytical HPLC and stability indicating method has been optimized, developed and validated with DOE for the determination of Tamsulosin and Dutastaride in formulations.

SHREE CHANAKYA EDUCATION SOCIETY'S
INDIRA COLLEGE OF PHARMACY
Approved by All India Council for Technical Education, and Pharmacy Council of India, New Delhi.
Recognized by Govt. of Maharashtra, Directorate of Technical Education (MS)
Affiliated to Savitribai Phule Pune University ID No. PUNKS/Pharmacy/258/2006

INDIRA

This is to certify that

Prof./Dr./Mr./Ms. A. R. Tekade

Of M. M. College of Pharmacy, Pune

has attended **Round Table Conference with the President of the Controlled Release Society, India Chapter,** held at Indira College of Pharmacy, Pune on 4th August 2017.

Dr. Anagha Joshi
Principal
Indira College of Pharmacy

Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

'Niramay', 89/2 - A, New Pune - Mumbai Highway, Tathwade, Pune - 411 033, India.
Tel. : +91-20-66759603 /06 Fax : +91-20-66759601 E-mail : adminicp@indiraicp.edu.in Website: www.indiraicp.edu.in

Shree Chanakya Education Society's

INDIRA COLLEGE OF PHARMACY

"Redefining Pharmacy Education"

In Association with

SOCIETY FOR ETHNOPHARMACOLOGY INDIA (SFE, PUNE CHAPTER)

Savitribai Phule Pune University

Sponsored National Conference on

'ETHNOMEDICINE: PROSPECTS AND CHALLENGES IN GLOBAL HEALTHCARE SCENARIO'

10th 'INDIRA PHARMA ZEAL'

Certificate

Prof./Dr./Mr./Mrs./Ms. M. J. PATIL

has participated in the two days National Level Conference on "Ethnomedicine: Prospects & Challenges in Global Healthcare Scenario", as a Chairman / Co-Chairman / Resource Person / Delegate / Organizing Committee member / Volunteer, organized by SCES's Indira College of Pharmacy, Pune, held on 21st and 22nd February 2018.

Dr. Tarita Shankar	**Prof. Chetan Wakalkar**	**Dr. L. Sathyanarayanan**	**Dr. Anagha M. Joshi**
Chairperson, IGI	**Group Director, IGI**	**Coordinator SFE (Pune Chapter)**	**Principal & Convener**

Maharashtra Mitra Mandal's College of Pharmacy, Thergaon, Pune-33 — Estd. 2006

PRINCIPAL
Maharashtra Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

SAVITRIBAI PHULE PUNE UNIVERSITY
(Formerly University of Pune)

Internal Quality Assurance Cell

AVISHKAR 2018

DISTRICT LEVEL RESEARCH COMPETITION

Certificate of Participation

This is to certify that Shri./smt. ***Dr. Tekade Avinash Ramrao*** of ***MARATHWADA MITRA MANDAL MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY*** has participated at the **"Avishkar – 2018"** District Level Research Competition at ***PG Level*** in the ***Medicine and Pharmacy*** Category, held at ***Dr. D. Y. Patil Arts, Commerece & Science College Akurdi Pune*** on ***9th December 2018.***

Prof. Anjali Akiwate
Coordinator

Dr. Mohan Waman
Principal

Mr. M. V. Rasve
Assistant Registrar

Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

सावित्रीबाई फुले पुणे विद्यापीठ

(पूर्वीचे पुणे विद्यापीठ)

विद्यार्थी विकास मंडळ

विद्यार्थी विकास अधिकारी

प्रशंसा प्रमाणपत्र

मुकेश रत्नपारखी

मराठवाडा मित्र मंडळ कॉलेज ऑफ फार्मसी,
काळेवाडी फाटा, पिंपरी रोड, थेरगांव, पुणे

आपण विद्यार्थी विकास अधिकारी म्हणून सलग तीन वर्षे उल्लेखनीय कार्य केल्याबद्दल आपणास हे प्रशंसा प्रमाणपत्र गौरवपूर्वक प्रदान करण्यात येत आहे.

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

डॉ. प्रभाकर देसाई
संचालक

"Shall and Will to Make and Serve Quality Pill"

69th IPC 2017

CHANDIGARH

22nd - 24th December, 2017

PHARMA VISION 2018

PHARMACISTS FOR A HEALTHY INDIA

Certificate

This is to certify that

Prof./Dr./~~Mr./Ms.~~ Manohar Janardhan Patil

has participated as Delegate / Volunteer

in the 69th Indian Pharmaceutical Congress

held at Chitkara University, Rajpura from December 22nd to 24th, 2017.

Maratwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

Dr. Mahesh Burande	Dr. Shailendra Saraf	Dr. Dhirender Kaushik	Dr. Ashish Baldi
President - IPCA	Chairman - LOC	Organizing Secretary	Chairman, Registration Committee - LOC

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Indian Pharmaceutical Teachers of India

Marathwada Mitra Mandal's

College of Pharmacy

S. No. 4/17, Sector No. 34, PCNTDA

Thergaon (Kalewadi) Pune-411033

NOTICE

Date: 12/09/2017

All the students of Third, Final year B Pharm and M Pharm are hereby noticed that, the three days "Entrepreneurship awareness Camp (EAC)" is arranged on 26th September to 28th September 2017 at our institute. The detailed schedule of the same is as:

Sr. No.	Date & Time	Venue	Resource Person
1	26th to 28th September 2017; Tuesday, Wednesday and Thursday 9.30 am to 5.00 pm	Seminar Hall	Experts from Maharashtra Centre for Entrepreneurship Development. (MCED, Pune)

All are informed to attend the same. **"Attendance is compulsory"**

Objective of EAC:

1) To impart awareness about entrepreneurship as a career choice.
2) To impart awareness about business opportunities.
3) To impart awareness about support system.
4) To present few role models in entrepreneurship.

Methodology:

1) One way lectures.
2) Sharing of experiences.
3) Panel discussion.
4) Question- answers.

Dean

Training, Placement, III, E.D. Cell

Dr. Manohar J. Patil

(Principal)

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S

COLLEGE OF PHARMACY

Thergaon, Pune-411033

MMCOP

Bestowing Health & Happiness

ENTREPRENEURSHIP AWARENESS CAMP (EAC)

IN ASSOCIATION WITH

MAHARASHTRA CENTRE FOR ENTREPRENEURSHIP DEVELOPMENT PUNE

26th to 28th September 2017

Training, Placement, III & E. D. Cell, MMCOP, Pune

....building Pharmacy Professionals through Education par Excellence

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S
COLLEGE OF PHARMACY
Thergaon , Pune-411033

A REPORT ON ENTREPRENEURSHIP AWARENESS CAMP (EAC)

Entrepreneurship Awareness Camp was inaugurated by Mr. Suresh Umap, State Coordinator, and Maharashtra Centre for Entrepreneurship Development, Pune and Dr. Manohar J. Patil, Principal of institute.

Day 1: 26/09/2017

Session I (9.45 to 11.30 am): Mr. Hemant Bhagwat, State Coordinator, MCED, Pune delivered seminar on "Entrepreneurship as a career choice and Motivation".

Session II (12.00 to 1.30 pm): Mr. Ashok Pattar who is popular trainer in various subjects delivered seminar on "Business Opportunities Guidance".

Session III (2.00 to 3.30 pm): Mr. G. H Tirandaj Faculty, MCED, Pune delivered seminar on "Various Business Steps"

Session IV (3.30 to 4.30 pm): Dr. Rizwan Pinjari delivered seminar on "R&D Technical institute in different sector".

Day 2: 27/09/2017

Session I (10.0 to 11.30 am): Mrs. Padmavati Shivgunde, Psychologist, delivered motivational seminar.

Session II (11.30 to 1.00 pm): Mr. Sunil Shete, Ex In-charge- District industry centre, Maharashtra delivered seminar on "Various scheme of District industry centre"

Session III & IV (1.30 to 4.30 pm): How to start Small Enterprises, Mr. Digambar Suter, M. D. Quality Engineers, Pune

Day 3: 28/09/2017

Session I (10.0 to 11.30 am): Mr. Dileep Yevlekar Faculty, MCED, Pune has delivered seminar on Basic management concepts.

Session II (11.30 to 1.00 pm): Mr. Ashok Pattar Faculty, MCED, Pune, Successful Entrepreneur, shared his experiences with students

Session III (1.30 to 3.00 pm): Mr. Hemant Bhagwat, State Coordinator, MCED, Pune, delivered seminar on "Pharma Marketing Management".

M.M.'s College of Pharmacy Estd. 2006 Thergaon Pune-33

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Session IV (3.00 to 3.30 pm): Mr. Suresh Umap R.O. MCED, Pune explained Forth coming training opportunities from MCED.

At end of programme Dr. Rahul H. Khiste explain glimpses of 3 days' workshop. He presented vote of Thanks and concluded the programme

Day	Session-I 10.00 a.m. to 11.30 a.m.		Session-II 11.30a.m.to1.00p.m.	Session-III 1.30 p.m.to 3.00 p.m.	Session-IV 3.00 p.m. to 4.30 p.m.
	Inauguration				
26.09.2017	Inaugurational speech Mr. Suresh Umap, R.O. MCED, Pune	Entreprene urship as a career choice and Motivation . By	Business Opportunities Guidance by Mr. Ashok Pattar Faculty, MCED, Pune	Various Business Steps , Project Report, Project financing and documents required, Mr. G. H Tirandaj Faculty, MCED, Pune	R & D Technical institute in different sector by Dr. Rizwan Pinjari
27.09.2017	Motivational Training, Mrs. Padmavati Shivgunde, Psychologist		Various scheme of DIC, About bank information start to business , Mr. Sunil Shete, Faculty, MCED, Pune	How to start Small Enterprises, Mr. Digambar Suter, M. D. Quality Engineers, Pune	How to conduct market survey, Mrs. Tejswini Domase Sawai Faculty, MCED, Pune
28.09.2017	Basic management concepts, Mr. Dileep Yevlekar Faculty, MCED, Pune		Sharing of experiences of successful entrepreneurs , by Mr. Ashok Pattar Faculty, MCED, Pune	Pharma Marketing, Management , speech Mr. Hemant Bhagwat, R.O. MCED, Pune	Personnel Feedback & Valedictory , Forth coming training opportunities from MCED, Mr. Suresh Umap R.O. MCED, Pune

M. M. M's College of Pharmacy Estd. 2006 Kothrud Pune-38

Dr. Rahul H. Khiste
Dean, Training, Placement, III, EDC

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandals

College of Pharmacy

S. No. 4/17, Sector No. 34, PCNTDA

Thergaon (Kalewadi) Pune- 411033

Report on

Entrepreneurship Awareness Camp (EAC)

Prepared by

Dr. Rahul H. Khiste (Dean, Training, Placement, III, E.D.Cell)

Mr. Pramod H. Sakpal (Programme Coordinator)

Programme details

Date of Workshop/Programme: 26th September to 28th September 2017

No of students participated: Student of Third, Final year B Pharm and M Pharm.

Objectives of the program-

- To spread entrepreneurial culture.
- To develop entrepreneurs through systematic training.
- To disseminate information and data regarding entrepreneurship.
- To help industries and institutions in mobilizing human resources with an entrepreneurial approach.
- To create awareness about emerging & future entrepreneurial opportunities and challenges.
- To develop competencies in business internationalization.
- To conduct Organizational Development Programs.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

The 3 days Entrepreneurship Awareness Programme (EAC) developed by Maharashtra Centre for Entrepreneurship Development (MCED) was organized at institute on 26th September to 28th September 2017. The strength of students for programme was 124. In this programme 06 experts had delivered 07 lectures/sessions on Entrepreneurship awareness and development. Objective of said workshop was To make Student aware about entrepreneurship as a career choice, To make Student aware about business opportunities, To make Student aware about support system and To present Student few role models in entrepreneurship.

Day 1: 26/09/2017

Entrepreneurship Awareness Camp was inaugurated by Mr. Diwakar Keskar, State Coordinator, Maharashtra Centre for Entrepreneurship Development, Pune and Dr. Manohar J. Patil, Principal of institute.

Session I (9.45 to 10.30 am): Mr. Hemant Bhagwat, State Coordinator, MCED, Pune delivered seminar on "Entrepreneurship as a career choice and Motivation".

Session II (10.30 to 12.00 pm): Mr. Rajendra Fukane, Director Rajendra Chemical delivered motivational seminar.

Session III (12.00 to 1.30 pm): Mr. Ashok Pattar who is popular trainer in various subjects delivered seminar on "Business Opportunities Guidance".

Session IV (2.00 to 3.30 pm): Prof. Mukhedkar delivered seminar on "Various Business Steps"

Session V (3.30 to 4.30 pm): Dr. Rizwan Pinjari delivered seminar on "R&D Technical institute in different sector".

Day 2: 27/09/2017

Session I (10.0 to 11.30 am): Mrs. Padmavati Shivgunde, Psychologist, delivered motivational seminar.

Session II (11.30 to 1.00 pm): Mr. Ashok Khandare, Ex Incharge- District industry centre, Maharashtra delivered seminar on "Various scheme of District industry centre"

Session III & IV (1.30 to 4.30 pm): Dr. R. G. Vaidya, Director- Synergy research, Pune delivered seminar on "How to conduct market survey".

Marathwada Mitra Mandal's College of Pharmacy Thergaon, Pune-33 Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy Thergaon, Pune-33 Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Day 3: 28/09/2017

Session I (10.0 to 11.30 am): Mr. Kanchan Kulkarni, Sr Manager, ICICI Bank, Mumbai delivered seminar on "About bank information start to business".

Session II (11.30 to 1.00 pm): Mr. M.B. Shinde, Successful Entrepreneur, shared his experiences with students

Session III (1.30 to 3.00 pm): Mr. Hemant Bhagwat, State Coordinator, MCED, Pune, delivered seminar on "Pharma Marketing Management".

Session IV (3.00 to 3.30 pm): Mr. Suresh Umap R.O. MCED, Pune explained Forth coming training opportunities from MCED.

At end of programme Dr. Rahul H. Khiste explain glimpses of 3 days workshop. He presented vote of Thanks and concluded the programme

Dr. Rahul H. Khiste (Dean, Training, Placement, III, E.D.Cell)

Mr. Pramod H. Sakpal (Programme Coordinator)

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Estd. 2006

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
1)	Vedesh. P. Gurav	gvravvedesh@gmail.com	8600959623	Male	26/11/1995	OBC
2)	Kadam Pradeep S	KadamPradeepS13@gmail	7276111133	male	19/1/94	open.
3)	Abhishek D. Shewale	abhishewale97@gmail.com	9405004789	male	01/07/1996	OBC.
4)	Jagtap Mahesh V.	Jsmaheshyag1ap346@gmail	7350961649	male	10-10-19[illegible]	open
5)	Dhas sharad N.	sharaddhey06@gmail.com	7030402735	male	19-8-96	open
6)	Shapkar Nilkanth D	nilkanthshapkar902@gmail.	7040090384	male	14-3-97	Open
7)	Kiran B Mule	Kiranmule110@gmail	8999399425	Male	18-9-97	open
8)	Yogesh D. Nevale	Yogeshnevale216@gmail	9604097886	M	28/06/96	OBC
9)	Rohit V. Kale	Rohitkale759@gmail	7302444439	M	06/10/96	NT-C
10)	Aher Sagar A.	ahers82@outlook.com	9922331980	M	12/08/1995	OBC.
11)	Khemnar Rameshwar R	ramkhemnar6@gmail.com	9922956098	M	14/05/1995	NT-C
12)	Pranjali T. Sanap	Pranjalisanap96@gmail.com	7038342178	Female	12/01/1996	NT D
13)	Snehal A. Gaikwad	Gaikwad.snehal251994@gmail.com	9561233482	Female	25/12/1994	SC

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 0[illegible]

MCED

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
14	Bhagyashri S Dhakne	dyaps Khade @ gmail.com	9545759308	F	15/10/1994	NT-D
15	Sayali R. Sathe	Sathesayali7113@gmail.com	9561856973	F	7/4/1998	OPEN
16	Mayuri Rathod	mayurarathod@gmail.com	9763536966	F	19/12/1997	VJ/NT
17	Supriya Shivling kumbhar	kumbharsupriya928@gmail	9922490416	F	16-09-96	Open
18	Nivedita P. Sutar	niveditasutar23@gmail.com	8856026228	Female	20th May 1995	OBC
19	Bhosale Priyanka Pravin	priyanka.bhosaleagro@gmail	9503994876	F	17th Aug 1995	Open.
20	Komal B. Tupekar	Komal.Tupekar@gmail.com	9923067615	F	26th Aug 1994	OBC
21	Kirtimala R. Falak	KRfalak7@Gmail.com	9750579953	F	11/02/1995	OBC
22	Rekha G. Adbal	rkadbal@gmail.com	9561474898	Female	7/04/1996	SBC
23	Komal Ashok chinchawade	komalchinchawade52@gmail	8446585445	female	15/03/1997	OPEN
24	Smital Madhukar Bhagade	smitalbhagade302@gmail.com	8796537153	F	07/01/1997	OPEN
25	Gayatri Rajendra Kanawade	angelgayu14@gmail.com	9139731473	female	14/09/1994	OPEN
26	Pooja L. Khalage	Poojakhalage@gmail.com	9049929396	F	4/5/1996	ST

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 03

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
27	Bhilare Shailaka Anand	shailabhilare25@gmail.com	9403287507	F	21-5-1993	Open
28	Tawale Gayatri Kailas	gayatri197@gmail.com	9921865224	F	19-06-1997	OBC
29	Bhosale Kamal Dilip	kmlbhosale@gmail.com	9922097439	F	01-10-1996	Open
30	Vasudha Vasant Dhepe	vasudhadhepe1997@gmail.com	8698974126	F	17-3-1997	Open
31	Nikeeta Sidram Wadavarao	nikeewadavarao8397@gmail.com	7507631021	F	8-3-1997	SC
32	Patil Shrutika Ramachandra	Patilshrutika39@gmail.com	9130487224	F	24-06-1996	Open
33	Sarawade Nanasaheb B.	Sarawadebharat@gmail.com	8055861560	F	09-08-1996	SC
34	Amruta Prabhakar Pote	potearmuta@gmail.com	8856967029	F	22/7/1996	ST
35	Rajeshri Devanand sutar	rajeshrisutar24@gmail.com	7768806922	F	24/12/1997	OBC
36	Dipti Ashok Chole	diptichole2017@gmail.com	9923807699	F	15/10/1996	NT3
37	Varsha Manohar shinde	shindev2828@gmail.com	9527547712	F	23/4/1998	Open
38	Mayuri Dilip Pawar	mayuripawar0860@gmail.com	9527543279	F	23/1/1998	SC
39	Pragati Ganpat Gargote	pragatigadule2515@gmail.com	9130232586	F	15/10/1993	Open

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MCED

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp

Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy

Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
40	Priyanka Rajendra Bhure	priyankabhure7191@gmail.com	9579796801	F	5/1/1996	NTC
41	Prachi Arun Kadam	prachi1736@gmail.com	7745041450	F	19/10/1996	open
42	mayuri sharad shinde	mayuri s shinde 91@gmail.com	9021225895	f	30/05/1997	open
43	shraddha Uday shinde	shraddhashinde225 6@gmail.com	7350005695	f	25/9/1996	open
44 53	Shinde Komal Mahadev	Shindekomal252@gmail.com	8237028582	F	02/02/1997	OBC
45 ~~07~~	Priyanka Pmkash Bhole	pbhole1199@gmail.com	9822046978	F	28/5/1997	SC
46	Nikita kalyan Doke.	nikitadoke121@gmail.com	9552462454	F	12/1/1997	open
47	Swapnali Dattatray Gaikwad	Swapnaligaikwad4731@gmail	9561796907	f	29/03/1998	open
48.	Pratiksha Parmeshwar Doke	pratiksha.doke1292@gmail.	77 22 07 68 63	f	12/05/1998	open
49.	Monika Dattatray Bhapkar	monikabhapkar729@gmail.com	8308310171	F	07/02/1997	open
50	Nikita Sanjay Bhosale	nikitabhosale9623@gmail.com	8149984270	F	22/04/1998	open
51	Sushma kisan Anarase	anarasesushma@gmail.com	9767033096	F	20/03/1998	OBC
52.	Diksha Tatyaram Gore	goredikshag98@gmail.com	9766685322	F	11/11/1998	OBC

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MCED

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
53	Akanksha Yogesh Hedoo.	Yogitahedoo36@gmail.com	9422386301	Female	10/1/1998	SBC.
54	Sonali Subhash Kadam	Kadamsona21@gmail.com	9766349314	Female	26/12/1997	Open
55	Prachi Ashokrao Halburge	Halburgeprachi@gmail.com	8180930787	Female	11/08/1995	SC
56	Jyoti Narayan Yadav	Jyotiyadav2015@gmail.com	8446929196	Female	09/01/1996	Open.
57	Yelne Ankita Ghanshyam	yelneankita911@gmail.com	8485865232	Female	01-01-1995	OBC
58	Aishwarya Sandeep Ambekar	ambekararadhaaya.99@gmail.com	7028100286	female	18-04-1995	OBC
59	Komal C. Mehetre	komalmehetre77@gmail.com	7350892411	Female	7-12-1993	OBC
60	snehal uttam kashid	snehalkashid123@gmail.com	9834787448	female	12-3-1996	Open
61	Rasika Narasaheb Tilekar	rasikatilekar25@gmail.com	7276058225	female	~~28/9/19~~ 19/10/1996	OBC.
62	Hasiba Khalilahid Usmani	hasibaulmanio@gmail.com	8625918241	Female	10-7-1997	Open.
63.	Sawant Pooja Bhikaji	Sawantpooja1910@gmail.com	9764199402	female	23-5-1997	Open
64	Diksha Shashikant Sathe	sathedsk@yahoo.com	9881203809	Female	08-10-1997	SC
65	Patekar chandani Thengan	Patekar.chandani09@gmail.com	7040460807	female	14/01/1997	SC

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp

Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy

Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
66	Priya Ankush Navasare	Priyanavasare273@gmail.com	9552484689	Female	27/03/1995	open
67	Aishwarya Shashikant Panbude	aishwaryap1528@gmail.com	9956992488	Female	15/01/1995	open
68	Harish Mohanlal Chaudhary	harishc993@gmail.com	9762427102	Male	02/03/1996	open
69	Hetlash Bheemaram Choudhary	hiraneshchaudhary@gmail.com	9762680664	Male	29/06/1995	open
70	Jeevendra Durgaram Choudhary	jeevendra1731@gmail.com	9817171721	Male	31/05/1997	open
71	Ramesh Sreeharam Choudhary	rameshchaudhary2078@gmail.com	8806702664	Male	13/12/1995	open
72	Gurunath Nagnath Salgar	gurusalgar123@gmail.com	7637770026	Male	11/11/1996	open
73	Aniket Balasaheb Pote	aniketpote54@gmail.com	8888326365	Male	29/03/1997	SC
74	Akshay Baliram Bhad	akshaybhad604@gmail.com	9922464378	Male	28/04/1997	open
75	Shubham Rajendra Musale	shubham.musale1@gmail.com	8655996595	male	3/03/1997	OBC
76	Gudewar Chetan B.	chetangudewar4@gmail.com	9780077530	Male	06/07/1993	OBC
77	Rupesh Ramrao Salunke	Rupesh5355@gmail.com	9665030870	Male	19/04/1996	open
78	Shakyemuni Kuldip Manik	kuldipshakyemuni1996@gmail.com	7058574228	Male	02/06/1997	SC

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MCED

MAHARASHTRA CENTER FOR ENTREPRENEURSHIP DEVELOPMENT, PUNE

Name of the Programme: Entrepreneurship Awareness Camp

Duration : 26.09.2017 To 28.09.2017

Venue : MM College of Pharmacy

Time :9.30 To 5.00

Participant's Profile

Sr. No.	Name & Place	E-Mail	Mobile No.	Male/ Female	Date of Birth	Caste
79	Sabale Nitin Sopan	Sabalenitin96@gmail	8390939329	male	05/10/1996	Open.
80	Birader Avinash chandrakant	a/birader19@gmail.com	7350779591	Male	15/01/1994	open
81	Chavan Akshay Dayaram	addpatilakshaychavan@gmail.com	9561751264	male	10/11/1993	VJ (A)
82	Khairate Shailesh Dagdu	shaileshkhairat099@gmail	8552-802186	male	27/7/1996	OBC
83	Dhiraj R. Madrewar	dhirajmadrewar34@gmail.com	8793 256666	male	01/6/1997	Open
84	Gorakhnath B Mokashe	gorakhnathmokashe8@gmail.com	8605288088	male	25/07/1997	NT(B)
85	Nagnath M. Mane	nagnathmane3435@gmail.com	9673640373	Male	14/4/1993	NT(C)
86	Jagtap Mayur M.	Jagtapmm80@gmail.com	8380648280	male	24-6-1996	open
87	Suraj Ramesh Bolbhare	bolbharesuraj@gmail.com	8975645961	male	25/8/1995	Open
88	Prashant Prabhakar Khande	Prashantkhande810@gmail.com	7743829779	male	3/9/1997	open.
89	Aniket Sanjay Nikam	aniketnikam09@gmail.com	8087000898	Male	19/10/1996	OPEN
90	Jeetendra A Choudhary	jeetendra1731@gmail.com	9817171721	Male	31/05/1997	OPEN.
91	Gholave Vishal Laxman	vishalgholave214@gmail.com	9763448600	Male	25-10-1994	NT-D

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MarathwadaMitra Mandal's
College of Pharmacy
S. No. 4/17, Sector No. 34, PCNTDA
Thergaon, Pune-411033

Date: 16/10/2017

NOTICE

All the students of B. Pharm and M. Pharm are hereby informed that an industry visit is organized at Barclays Tech. Centre Ind. Pvt. Ltd, Pune on 23rd October, 2017 by our institute. The detailed schedule of the same is as:

Sr. No.	Date & Time	Venue	Faculty Name
1	23rd October, 2017 10:00 am to 04:30 pm	Barclays Tech. Centre Ind. Pvt. Ltd, Pune.	1.Dr. Rahul H. Khiste Dean Training, Placement, III, and EDC. MMCOP, Pune. 2.Mrs. Kavita N. Yadav Asst. Prof. MMCOP, Pune.

All are informed to attend the same. **"Attendance is compulsory"**

Dr. Rahul H. Khiste
Dean, Training, Placement, III & E.D. Cell

Dr. Manohar J. Patil
(Principal)
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Gmail tpo mmcop <tpommcop@gmail.com>

Fwd: Barclays Employee Engagement

7 messages

Program Coordinator VVKI <ntcproposals@vvki.org>
To: tpommcop@gmail.com
Mon, Oct 23, 2017 at 3:28 PM

Dear Mr.Khisti Sir,

Further to our conversation, I'd like to take this opportunity to introduce to you, the "Barclays Connect with Work"Initiative, a one of a kind project to enhance the employability of students across India.

15 students have expressed interest from your college, please take approval from the principal for the same. We have also arranged transportation for these students.

The session is scheduled for 10.15am tomorrow, kindly send a faculty to accompany the student.

Further details are below:-
Barclays is a major global financial services organisation engaged in personal, corporate and investment banking with an extensive international presence in Europe, the Americas, Africa and Asia.

Barclays is involved in a number of CSR activities and IAHV is collaborating with it, to facilitate its Youth Employability initiatives.

Every year, lakhs of engineering and management students graduate across India,but are not successfully placed in the corporate sector. This can be attributed to the huge Skill Gap.
The vision of this project is to integrate the industry required job skills & life skills with the existing curricula to enhance the employability potential of the college youth.

As a part of this initiative , we are facilitating the **EE - Employee Engagement sessions,** an opportunity for final yearstudents across India, to interact with professionals at Barclays and also get trained on corporate soft skills . We have been partnering with different colleges across India and we would like to extend this opportunity to the students of your college. We invite **selected** batches of 15 students , for a 1.5 hour session at the Barclays Office, Tuesdays/Fridays at 10.15 am for the month of October/November.

I have attached a proposal below. Please revert to this email or reach out to me at 7907164042, if your placement cell would like to make use of this opportunity and collaborate with us on this initiative. Prior attendees have given excellent feedback for these sessions and it would be really beneficial for your students to gain this exposure.

Regards,

Archana Radhakrishnan
Program Cordinator
Barclays Employability Initiative
+91-7907164042

Employee Engagement_Pune.pdf
448K

Program Coordinator VVKI <ntcproposals@vvki.org>
To: tpommcop@gmail.com
Mon, Oct 23, 2017 at 3:29 PM

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's

College of Pharmacy,

Thergaon (Kalewadi), Pune 411 033

List of Students Participated in Industrial Visit at Barclays Tech. Centre Ind. Pvt. Ltd, Pune on 23/10/2017

From Final Year B.Pharm & M. Pharm (2017-18)

Sr. No.	Name of the Student	Class	Sr. No.	Name of the Student	Class
1	Adbol Rekha Gajanan	B. Pharm	31	Khande Prashant Prabhakar	B. Pharm
2	Adsule Ajinkya Balkrishna	B. Pharm	32	Kumbhar Supriya Shivling	B. Pharm
3	Bebale Neha Suresh	B. Pharm	33	Lahane Purushottam Sahadev	B. Pharm
4	Bhad Akshay Baliram	B. Pharm	34	Mali Ashwini Ramdas	B. Pharm
5	Bhaigade Smital Madhukar	B. Pharm	35	Nagpurkar Shweta Vilas	B. Pharm
6	Bhapkar Nilkanth Dattatraya	B. Pharm	36	Nevase Yogesh Dilip	B. Pharm
7	Bhilare Shalaka Ananda	B. Pharm	37	Nikam Aniket Sanjay	B. Pharm
8	Bhole Priyanka Prakash	B. Pharm	38	Ovhale Pradeep Prakash	B. Pharm
9	Bhosale Komal Dilip	B. Pharm	39	Parande Manoj Ramkrushna	B. Pharm
10	Bokhare Suraj Ramesh	B. Pharm	40	Patekar Chandani Parmeshwar	B. Pharm
11	Chaudhary Harish Mohanlal	B. Pharm	41	Patil Shrutika Ramachandra	B. Pharm
12	Chinchawade Komal Ashok	B. Pharm	42	Pawar Mayur Uttam	B. Pharm
13	Choudhary Jeetendra Achalaram	B. Pharm	43	Pote Amruta Prabhakar	B. Pharm
14	Choudhary Kailash Bheemaram	B. Pharm	44	Riyal Pallavi Amardeo	B. Pharm
15	Choudhary Ramesh Shesharam	B. Pharm	45	Aher Sagar Atmaram	M. Pharm
16	Dhas Sharad Nandkumar	B. Pharm	46	Bodke Prameshwar Panditrao	M. Pharm
17	Dhepe Vasudha Vasant	B. Pharm	47	Chavan Bhaskar Uttamrao	M. Pharm
18	Dixit Abhishek Sunil	B. Pharm	48	Didbhai Pranjali Mukund	M. Pharm
19	Dodke Pramod Shrihari	B. Pharm	49	Gawai Swapna Ramesh	M. Pharm
20	Dongre Chandrakant Dhondiba	B. Pharm	50	Holkar Shekhar Sanjay	M. Pharm
21	Gurav Vedesh Pramod	B. Pharm	51	Jawanjal Pranay Ashokrao	M. Pharm
22	Jagtap Mahesh Vilas	B. Pharm	52	Kamshetti Sheetal Kalyani	M. Pharm
23	Jare Sharad Gopinath	B. Pharm	53	Khemnar Rameshwar Raosaheb	M. Pharm
24	Jawale Gayatri Kailas	B. Pharm	54	Saruk Pranjali Tejaraj	M. Pharm
25	Kadam Prachi Arun	B. Pharm	55	Tupekar Komal Bhagwan	M. Pharm
26	Kadam Pradeep Sudhakar	B. Pharm	56	Yadav Jyoti Narayan	M. Pharm
27	Karekar Simaran Pravin	B. Pharm			
28	Karnawat Gayatri Rajendrakumar	B. Pharm			
29	Katkade Ruksharaj Devidas	B. Pharm			
30	Khalage Puja Laxman	B. Pharm			

Dean, Training, Placement, III & EDC

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Marathwada Mitra Mandal's College of Pharmacy
Kalewadi Phata- Pimpri Road,
Thergaon (Kalewadi), Pune-411033

INDUSTRY VISIT REPORT ACADEMIC YEAR-2017-18

Marathwada Mitra Mandal's College of Pharmacy organizes Industrial Visits for B. Pharm and M. Pharm students to upgrade the students with current updates about the industrial profession. And to provide the knowledge of new modern techniques employed in the industries. Students have visited the reputed Pharma industry, which helps to develop innovative ideas among the students for the research.

Date of visit	23rd October, 2017
Place of visit	Barclays Tech. Centre Ind. Pvt. Ltd, Pune
Coordinators from college	Dr. Rahul H. Khiste
Approved by	Dr. Manohar J. Patil
Participating students	56
Accompanying faculty members	Mrs. Kavita N. Yadav
Objectives of visit	To provide students an insight regarding internal working of pharmaceutical industry for making a good professional career.
Outcome of visit	Students came to know how theoretical concepts are put to into action, thereby aiding their practical learning.

Dr. Rahul H. Khiste
Dean, Training, Placement, III & E.D. Cell

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

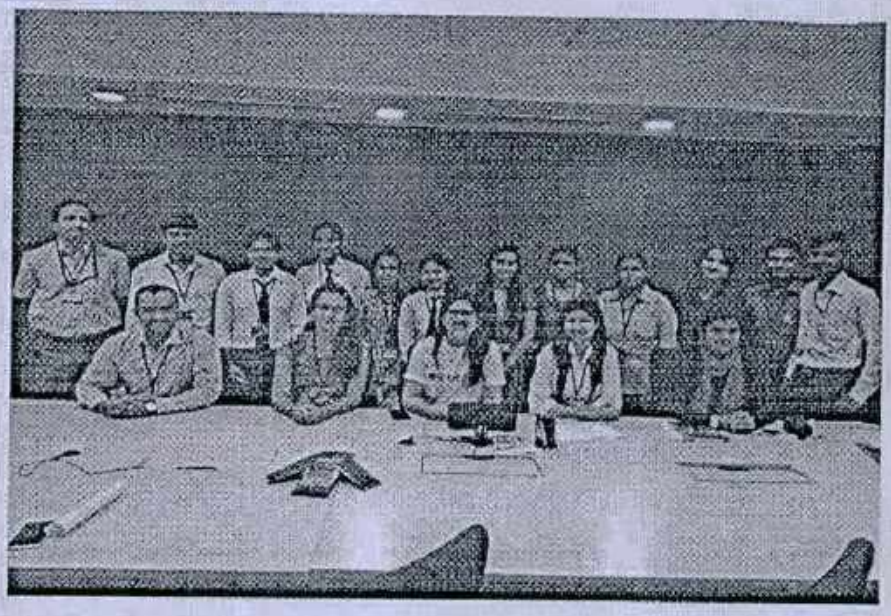
Dr. Manohar J. Patil
(Principal)
PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

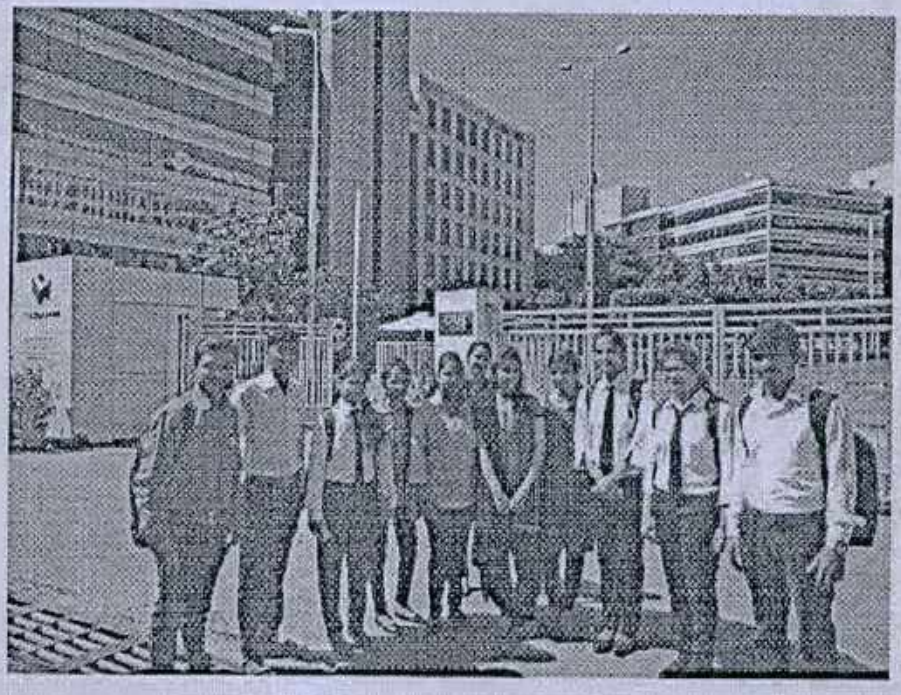
Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S
COLLEGE OF PHARMACY
THERGAON, PUNE-411033

INDUSTRY VISIT TO BARCLAYS TECH. CENTRE IND. PVT. LTD, PUNE ON 23rd OCTOBER 2017





Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY,

THERGAON, PUNE-411 033 (M.S)

2016-2017

Dr. Sohan S. Chitlange
Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pune.

Dr. Sohan S. Chitlange has around 18 years of Professional experience and has published more than 75 Research Papers in National and International Journals of repute. He is approved PG and Ph.D. Guide of S.P.P.U., Pune. He is also actively associated with various professional bodies. Presently he is Associate Secretary (Association of Pharmacy Teachers of India), Executive Council Member (Association of Unaided Private Pharmacy Colleges, Maharashtra), Special Invitee Member (Pharma Research and Development Association, Ahmedabad) and he also served as Member, Board of Studies, Pharmaceutical Chemistry, S.P.P.U., Pune. He received many prestigious awards for his extra-ordinary contribution in the field of education.

Dr. Vinayak K. Deshmukh
M.Pharm., Ph.D.
MES College of Pharmacy, Sonai, Ahmednagar.

Dr. Vinayak K. Deshmukh has an excellent academic background. He has almost 20 years of professional experience in the field of Pharmacy. He is currently working as 'Principal' at MES College of Pharmacy, Sonai, Ahmednagar. He is also recognised PG teacher and Research Guide for the students of S.P.P.U., Pune. He has attended and or organised many Seminars, Conferences and Workshops. He has published many Research Papers in various reputed National and International Journals. He also holds variety of other crucial positions like Examiner for evaluation of PhD thesis, Member for Board of Paper Setters, Ad hoc Reviewer for Journal of Pharmacy Research and many more.

Mrs. Babita A. Agarwal
M.Pharm.
Marathwada Mitra Mandal's College of Pharmacy, Thergaon.

Mrs. Babita Agarwal is currently working as an Assistant Professor at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune since 2006. She completed B.Pharm (2002) and M.Pharm in Pharmaceutical Chemistry (2007) from Pd. Dr. D.Y. Patil Institute of Pharmaceutical Sciences and Research affiliated to S.P.P.U. She has qualified GATE 2003. As a student of merit, she is recipient of Best outgoing student in the Diploma as well Graduation. She is Life member of Association of Pharmaceutical Teachers in India (APTI). She has total 16 years of teaching experience in Analytical, Organic and Biochemistry. She is currently pursuing Ph.D. at S.P.P.U., Pune in Pharmaceutical Chemistry. She has presented papers in National and International conferences and research competitions including state level Avishkar 2016, APTICON 2014. Her research interests include Analytical method development and Forced Degradation Studies and characterising the degradation pathways. She has few research publications to her credit.

Mrs. Sejal P. Gandhi
M.Pharm., Ph.D. (Pursuing)
Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune.

Mrs. Sejal P. Gandhi is presently working as an Assistant Professor, Department of Pharmaceutical Chemistry at Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune. She has 5.5 years of experience in teaching and research in pharmacy. She has published [illegible] research articles in various National and International journals of repute. She has presented [illegible] Conventions, Seminars and Conferences. She has co-guided 3 M. Pharm students. She [illegible] APTI.

ISBN : 978-93-24457-10-0

SUCCESS PUBLICATIONS
[illegible]

PHARMACEUTICAL ANALYSIS - II · S.Y.B.Pharm. (Sem. - IV)

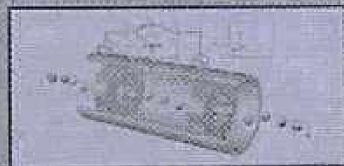
Practical Handbook of

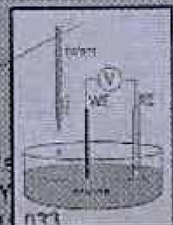
PHARMACEUTICAL ANALYSIS - II

S.Y.B.Pharm. (Sem. - IV)

Dr. Sohan S. Chitlange
Dr. Vinayak K. Deshmukh
Mrs. Babita A. Agarwal
Mrs. Sejal P. Gandhi

As Per New Syllabus





SUCCESS PUBLICATIONS

Dr. Sohan S. Chitlange

Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pune.

Dr. Sohan S. Chitlange has around 18 years of Professional experience and has published more than 95 Research Papers in National and International Journals of repute. He is approved PG and Ph.D. Guide of S.P.P.U., Pune. He is also actively associated with various professional bodies. Presently he is Associate Secretary (Association of Pharmacy Teachers of India), Executive Council Member (Association of Unaided Private Pharmacy Colleges, Maharashtra), Special Invitee Member (Pharma Research and Development Association, Ahmedabad) and he also served as Member, Board of Studies, Pharmaceutical Chemistry, S.P.P.U., Pune. He received many prestigious awards for his extra-ordinary contribution in the field of education.

Dr. Vinayak K. Deshmukh

M.Pharm., Ph.D.

MES College of Pharmacy, Sonai, Ahmednagar.

Dr. Vinayak K. Deshmukh has an excellent academic background. He has almost 20 years of professional experience in the field of Pharmacy. He is currently working as Principal at MES College of Pharmacy, Sonai, Ahmednagar. He is also recognised PG teacher and Research Guide for the students of S.P.P.U., Pune. He has attended and or organised many Seminars, Conferences and Workshops. He has published many Research Papers in various reputed National and International Journals. He also holds variety of other crucial positions like Examiner for evaluation of PhD thesis, Member for Board of Paper Setters, Ad hoc Reviewer for Journal of Pharmacy Research and many more.

Mrs. Babita A. Agarwal

M.Pharm.

Marathwada Mitra Mandal's College of Pharmacy, Thergaon.

Mrs. Babita Agarwal is currently working as an Assistant Professor at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune since 2008. She completed B.Pharm (2002) and M.Pharm in Pharmaceutical Chemistry (2007) from Pd. Dr. D.Y. Patil Institute of Pharmaceutical Sciences and Research affiliated to S.P.P.U. She has qualified GATE 2003. As a student of merit, she is recipient of Best outgoing student at the Diploma as well Graduation. She is Life member of Association of Pharmaceutical Teachers of India (APTI). She has total 10 years of teaching experience in Analytical, Organic and Biochemistry. She is currently pursuing Ph.D. at S.P.P.U. Pune in Pharmaceutical Chemistry. She has presented papers in National and International conferences and research competitions including state level Avishkar 2010, APTICON 2014. Her research interests include Analytical method development and Forced Degradation Studies and characterizing the degradation pathways. She has few research publications to her credit.

Mrs. Sejal P. Gandhi

M.Pharm., Ph.D. (Pursuing)

Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune.

Mrs. Sejal P. Gandhi is presently working as an Assistant Professor, Department of Pharmaceutical Chemistry at Dr. D. Y. Patil Institute of Pharmaceutical Sciences and Research, Pimpri, Pune. She has 3.5 years of experience in teaching and research in pharmacy. She has published 8 research articles in various National and International journals of repute. She has presented various papers in Conventions, Seminars and Conferences. She has co-guided 3 M. Pharm students. She is life member of APTI.

ISBN : 978-93-24457-01-1

SUCCESS PUBLICATIONS

PT-1920

Address : Radha Krishna Apartment, 535, Shaniwar Peth, Appa Balwant Chowk, Opp. Prabhat Theatre, Pune - 30.

Ph. No. [illegible], Mobile : [illegible]

E-mail : [illegible]

Website : [illegible]

PHARMACEUTICAL ANALYSIS - I   F.Y.B.Pharm. (Sem. - II)

Practical Handbook of

PHARMACEUTICAL ANALYSIS - I

F.Y.B.Pharm. (Sem. - II)

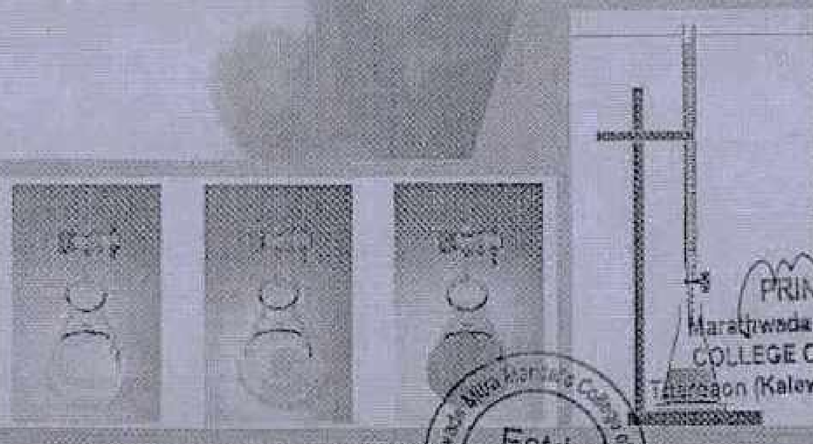
Dr. Sohan S. Chitlange

Dr. Vinayak K. Deshmukh

Mrs. Babita A. Agarwal

Mrs. Sejal P. Gandhi

As Per New Syllabus



SUCCESS PUBLICATIONS

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

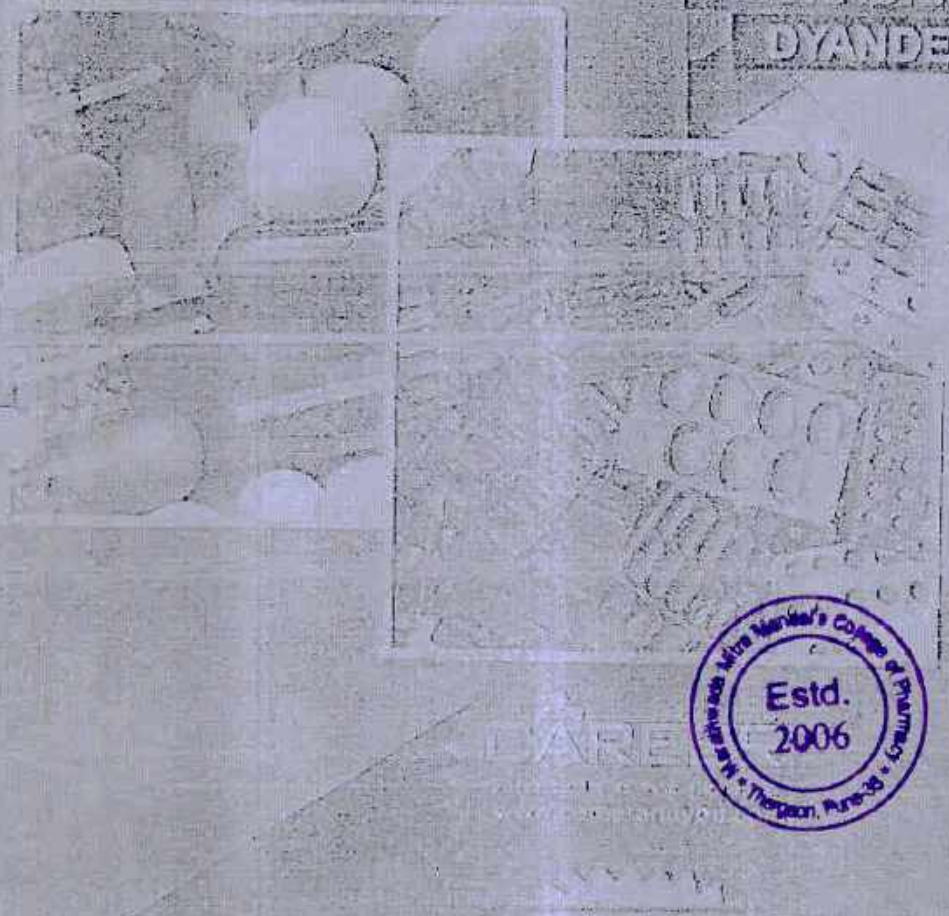
Estd. 2006

As per the Latest Syllabus of SPPU

Industrial Pharmacy-I

First Edition

HEMANT RANPISE
ANURADHA RANPISE
DYANDEVI MATHURE



Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Covers the Topics of Tablets (Unit I) & Capsules (Unit IV) as per PCI Syllabus for Semester V

Industrial Pharmacy

First Edition

HEMANT RANPISE
ANURADHA RANPISE
DYANDEVI MATHURE

About the Book

The book 'Industrial Pharmacy- I' is meant for B. Pharm. students. It provides an in-depth knowledge of Dosage Form Design & Formulation Strategies. The book covers information on tablet & capsule as dosage forms with their physico-chemical principles, additives, methods of formulation, IPQC & QC tests as per IP, BP, USP, equipments, defects & remedies. It also highlights concept, types, pharmacopoeial specifications, techniques & equipments used in tablet coating. Plant layout design and technology transfer for tablet & capsule manufacturing allow widening of students' horizons of knowledge. The authors have taken great efforts to explain all topics in details with diagrams and charts.

This book includes following chapters :

1) Principles of Dosages Form Design.
2) Tablets Formulation and Technology
3) Capsules
4) Coating Technology

About the Authors

Mr. Hemantkumar A. Ranpise completed his graduation from S. G. R.S. College of Pharmacy, Saswad in April 2003 and post graduation from Govt. College of Pharmacy, Karad in 2010. Presently, he is working as Assistant Professor in Sinhgad College of Pharmacy, Vadgaon Bk., Pune.

He is actively involved in research on formulation development of Nanocarriers for antifungals.

Ms. Anuradha A. Ranpise completed her graduation from S. G. R.S. College of Pharmacy, Saswad in April 2006 and post graduation from AISSMS College of Pharmacy, Pune in 2008. Presently she is working as Assistant Professor in Marathwada Mitra Mandal College of Pharmacy, Thergaon, Pune.

She is actively involved in research on formulation development of Self emulsifying drug delivery system for Antimicrobials.

Ms. Dyandevi Mathure completed her graduation from N.D.M.V.P.'s College of Pharmacy, Nashik in April 2008 and post graduation from AISSMS College of Pharmacy, Pune in 2010. Presently, she is working as Assistant Professor in Sinhgad Technical Education Society's, Smt. Kashibai Navale College of Pharmacy, Pune.

She is actively involved in research on formulation development of Nanocarriers for anxiety.

CAREER
Industrial Pharmacy-I
Price ₹ 475.00
9 789382 322450

16-17

Research Journal of Pharmacognosy and Phytochemistry
Year : 2016, Volume : 8, Issue : 3
First page : (121) Last page : (124)
Print ISSN : 0975-2331. Online ISSN : 0975-4385.
Article DOI : 10.5958/0975-4385.2016.00022.4 (http://dx.doi.org/10.5958/0975-4385.2016.00022.4)

Phytochemical and Toxicological Evaluation of Acorus calamus and Argyreia speciosa Leaves Extract

Patil P.J.[1]*, Patil V.R.[2]

[1]Marathwada Mitra Mandal's College of Pharmacy, Thergaon (Kalewadi), Pune-411 033, Maharashtra, India

[2]Tapi Valley Education Society's Hon. Loksevak Madhukarrao Chaudhari College of Pharmacy, Faizpur Dist: Jalgaon-425 503, Maharashtra, India

*Corresponding Author E-mail: pjnikampatil@gmail.com (mailto:pjnikampatil@gmail.com?cc=gbehal@indianjournals.com)

Online published on 18 October, 2016.

Abstract

In present study Acorus calamus and Argyreia speciosa were collected, their authentications were performed. These two plants were extracted by three different solvents. Extracts of these plants were subjected to different phytochemical analysis. Acute toxic studies of these plant extracts were performed to determine their safety. Phytochemical investigation were carried out by performing various tests viz. test for detection of carbohydrate, alkaloid, proteins, volatile oils, flavonoids, saponins, phenols, resin tannins, amino acid, steroids, triterpenoids, anthraquinones and coumarines. Acute oral toxicity was performed using OECD 420 guidelines. Groups of female rats are dosed in a stepwise procedure using the fixed doses of 5, 50, 300 and 2000 mg/kg. No toxic symptoms or mortality were observed in any animals, which lived up to 14 days after the administration of all extract of AC and AS upto the level of 2000 mg/kg body weight

Keywords

Acorus calamus, Argyreia speciosa, Phytochemical, Toxicological.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Pharmacogn. Mag.

ORIGINAL ARTICLE

The isolation, Characterization and Preclinical Studies of Metal Complex of *Thespesia populnea* for the Potential Peroxisome Proliferator-activated Receptors-γ Agonist Activity

Mohini Ashok Phanse, Manohar Janardhan Patil[1], Konde Abbulu[2]

Department of Pharmacognosy, Modern College of Pharmacy, Nigdi, [1]Department of Pharmacognosy, Maratha Mitramandal College of Pharmacy, Kalewadi, Pune, Maharashtra, [2]Department of Pharmaceutics, Mallareddy Institute of Pharmaceutical Sciences, Hyderabad, Telangana, India

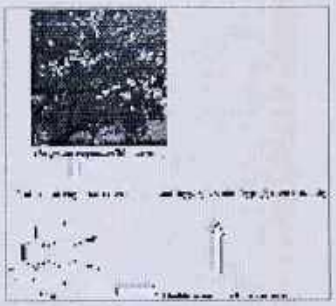
ABSTRACT

Background: Diabetes mellitus is an international public health problem since ancient days. The condition is predominantly more severe in developing countries like India where, life is more sedentary due to the even changing lifestyles in this fast-paced global scenario. *Thespesia populnea* is widely used in the ayurvedic system of medicine for treatment of diabetes mellitus in India for years. The aim of this work is to explore the anti-diabetic activity of the isolated compound. **Materials and Methods:** The sesquiterpene isolated from hexane fraction of bark of *T. populnea* modified synthetically then identified by using analytical techniques such as electron paramagnetic resonance spectra for confirmation and the anti-diabetic activity was evaluated by anti-hyperglycemic, hypoglycemic potential. **Result:** In the present work, we have studied the anti-hyperglycemic and hypoglycemic activity of the vanadium complex in glucose loaded and normal animals were shown significantly decreased in plasma blood glucose level. The results derived from preclinical studies confirm the potential of new sesquiterpene. **Conclusion:** The findings could provide evidence regarding the anti-diabetic potential of *T. populnea* by lowering blood glucose level.

Key words: Antihyperglycemic and hypoglycemic activity, diabetes mellitus, *Thespesia populnea*

SUMMARY

- *Thespesia populnea* is widely used in the ayurvedic system of medicine for treatment of diabetes in India. Present study aimed to explore the anti diabetic potential of isolated compound. Isolation of sesquiterpene from hexane fraction of bark of *Thespesia populnea* and modified synthetically then authenticated by using analytical techniques such as electron paramagnetic resonance spectra for confirmation. The modified complex was further assessed for its anti diabetic property in glucose loaded rats. Vanadium complex demonstrated significant reduction in plasma blood glucose level in glucose loaded animals. The results derived from preclinical studies confirm the potential of new sesquiterpene. The present findings conclude that anti diabetic potential of *Thespesia populnea* could be due to lowering blood glucose level by acting on PPAR-γ receptor.



Correspondence:

Asst. Prof. Mohini Ashok Phanse,
Department of Pharmacognosy, Modern College of Pharmacy, Nigdi, Pune, Maharashtra and PhD research scholar JNTUH, Hyderabad, India.
E-mail: phanse_mohini@yahoo.co.in

DOI : 10.4103/0973-1296.168984

Access this article online
Website: www.phcog.com
Quick Response Code:

INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder characterized by insulin resistance, hyperglycemia and associated with impaired lipid profile.[1] Considering the high incidence of diabetes mellitus, between 2010 and 2030, there will be a 69% raise in numbers of adults through diabetes in developing country and a 20% raise in developed countries. As a result, there is an increase in demand for a novel drug with a lesser side effect.[2] The main aim of organic and medicinal chemistry is to design, synthesize and produce molecules which act as important human curative agents. The compounds obtain from synthesis or plant source containing heterocyclic ring are of great significance receiving special attention as they belong to a class of compounds with proven utility in medicinal chemistry.[3]

In 1982, thiazolidinediones were intensively studied for their anti-hyperglycemic activity.[4] Thiazolidinediones are known to be insulin sensitizers and have been clinically used as anti-diabetic agents. The maleate of rosiglitazone, a medicine of the thiazolidinediones class, showed considerable clinical efficacy against diabetes mellitus.[5] Peroxisome proliferator-activated receptors (PPARs) include three isoforms: α, β/δ, and γ. PPARγ-is the predominant isoform in adipose tissue, macrophages, monocytes, intestinal cells, skeletal muscle, and endothelium. It plays an important role in the regulation of insulin sensitivity, lipid metabolism, adipogenesis and glucose homeostasis.[6] The target of the thiazolidinediones has been identified as the PPARγ and the glucose-lowering activities of the thiazolidinediones were shown to be closely related to their PPARγ agonistic activity.[7] Still the herbal supplementation and other substitute medicine have gradually increased to use for management of the diabetic disorder.

Cite this article as: Phanse MA, Patil MJ, Abbulu K. The isolation, characterization and preclinical studies of metal complex of *Thespesia populnea* for the potential peroxisome proliferator-activated receptors-γ agonist activity. Phcog Mag 2015;11:434-8.

INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH

A NOVEL SYNTHESIS ROUTE TO INDOLOPYRIDOQUINAZOLINE ALKALOID ANALOGUES FROM CONDENSED PYRIMIDINE SCAFFOLDS

Rahul H. Khiste*[1,2], Ashok G. Peepliwal[1], Hemant Kumar Jain[3]

[1]*NIMS University, Jaipur 303121, Rajasthan, India.*
[2]*Marathwada Mitra Mandal's, College of Pharmacy, Thergaon, (Kalewadi) Pune 411033, Maharashtra, India.*
[3]*Sinhgad College of Pharmacy, Vadgaon (Bk), Pune 411041, Maharashtra, India.*

ARTICLE INFO

Article history
Received 08/01/2016
Available online
31/01/2016

Keywords
Indolopyridoquinazoline,
Pyrimidine Scaffolds,
o-Aminoesters.

ABSTRACT

Development of new, elegant synthetic routes to bioactive quinazolinocarboline alkaloids Rutaecarpine, Euxylophoricine and their analogues is a challenging task of current interest. The present work focuses on a novel synthetic approach to Indolopyridoquinazoline and it's derivatives. The pentacyclic compounds were synthesized efficiently by using various condensed 2-chloromethyl pyrimidine scaffolds as important heterocyclic building blocks. This approach has been extended to the synthesis and diversification of compounds based on cyclization of a variety of nitriles with *o*-aminoesters of benzene, dimethoxybenzene under acidic conditions for pyrimidine scaffolds. Starting from condensed pyrimidine scaffolds, we have demonstrated an elegant five step practical synthesis of bioactive natural Indolopyridoquinazoline alkaloid analogues. This novel synthetic approach is amenable for the generation of library of bioactive Indolopyridoquinazoline analogues.

Corresponding author
Rahul H. Khiste
Institute of Pharmacy,
NIMS University,
Jaipur-303121, Rajasthan, India.
rahulkhiste@yahoo.com

Please cite this article in press as ***Rahul H. Khiste*** *et al. A Novel Synthesis Route To Indolopyridoquinazoline Alkaloid Analogues From Condensed Pyrimidine Scaffolds. Indo American Journal of Pharmaceutical Research.2016:6(01).*

Maharashtra State Commission for Women

Certificate

Presented to

Dr. MANDHAR J. PATIL

from

MM College of Pharmacy Pune

for participating in

Training Programme on Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

Internal Complaints Committee
Savitribai Phule Pune University

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Chairperson,
Maharashtra State Commission for Women

Maharashtra State Commission for Women

Certificate

Presented to

Mrs. Kavita N Yadav

from

Marathwada Mitramandal's College of Pharmacy

for participating in

Training Programme on Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

Internal Complaints Committee
Savitribai Phule Pune University

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune 411 033

V. K. Rahatkar

Chairperson,
Maharashtra State Commission for Women

1st National Teachers' Congress

Pune, India

INSPIRING TEACHERS STRENGTHENING GENERATIONS

Certificate of Participation

Presented
to

Dr. Manohar J. Patil

for participating in the 1st National Teachers' Congress held in Pune, India from September 23rd to 25th, 2016 and being a part of the Network of All-round and Spirited Teaching Fraternity of India.

President
Anil Kakodkar
Eminent Scientist
(Atomic Energy)

Executive President
Vijay P. Bhatkar
Eminent Computer Scientist

Convener
Rahul V. Karad
Vice President,
MAEER's MIT Group of Institutions, Pune
Founder, MIT-SOG & BCS

In association with

MIT-SOG MIT School of Government

Supported by

info@nationalteacherscongress.com | www.nationalteacherscongress.com

Pune, September 2016

Reg. No. : 708 / B539 / 1625

NTC Regd. No. IN-DL 495697972347210 | SOG Regd. No. F-2555

Marathwada Mitra Mandal's College of Pharmacy Estd 2006 Thergaon, Pune

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Bombay College of Pharmacy, Mumbai
...tion of Pharmaceutical Teachers of India (APTI), St. Charle's Centenary

1st National Teachers' Congress
Pune, India

INSPIRING TEACHERS STRENGTHENING GENERATIONS

Certificate of Participation

Presented
to

Prof. Pravin J. Patil

for participating in the 1st National Teachers' Congress held in Pune, India from September 23rd to 25th, 2016 and being a part of the Network of All-round and Spirited Teaching Fraternity of India.

President
Anil Kakodkar
Eminent Scientist
(Atomic Energy)

Executive President
Vijay P. Bhatkar
Eminent Computer Scientist

Convener
Rahul V. Karad
Vice President,
MAEER's MIT Group of Institutions, Pune
Founder, MIT-SOG & BCS

In association with

MIT School of Government

Supported by

AICTE

Maharashtra State Principals' Federation

info@nationalteacherscongress.com | www.nationalteacherscongress.com

Pune, September, 2016 Reg. No. : 2647 / B540 / 1626 NTC Regd. No. IN-DL 495697972347210 | SOG Regd. No. F-2555

Estd. 2006 Maharashtra Pharmacy Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2016

REGIONAL RESEARCH CONFERENCE

Certificate of Participation

This is to certify that Dr./ Shri./ Smt. Mukesh P. Ratnaparkhi

of M.M. College of Pharmacy participated and presented paper / poster entitled Design and Evaluation of Targeted Delivery of Gefitinib using polyethylene glycolated Multiwall Carbon Nanotube. in the Regional Research Conference "INNOVATION - 2016" for Savitribai Phule Pune University College Teachers in the subject Pharmaceutics held at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-33 on 21th Sept, 2016

Coordinator

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2016

REGIONAL RESEARCH CONFERENCE

Certificate of Participation

This is to certify that Dr./ Shri./ Smt. Rahul H. Khiste

of MMCOP, Thergaon, Pune participated and presented paper / poster entitled Design, Synthesis and Biological Evaluation of Some Novel Triazolo Oxadiazole derivatives in the Regional Research Conference "INNOVATION - 2016" for Savitribai Phule Pune University College Teachers in the subject Pharmaceutical Chemistry held at Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune-33 on 27th Sept 2016

Coordinator

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

MARATHWADA MITRA MANDAL'S COLLEGE OF PHARMACY,

THERGAON, PUNE-411 033 (M.S)

2015-2016

Hydrochloride. Research J. Pharm. and Tech. 8(11): Nov., 2015; Page 1512-1518. doi: 10.5958/0974-360X.2015.00270.X

View PDF

Conception and Evaluation of Extended Release Multiparticulate System of Milnacipran Hydrochloride

Siddharth Yerunkar[1]*, Mukesh Ratnaparkhi[2], Mahesh Bhadgale[2], Pramod Parshuramkar[2]

[1]Department of Pharmaceutics, Marathwada Mitra Mandal's College of Pharmacy, Thergaon, Pune -411033, Affiliated to Savitribai Phule Pune University, Pune MS

[2]Formulation Research and Development, Centaur Pharmaceutical Pvt. Ltd., Hinjewadi Pune, India

*Corresponding Author E-mail: **siddhart.y79@gmail.com**

ABSTRACT:

Milnacipran HCl is a selective norepinephrine and serotonin reuptake inhibitor well used drug for the treatment of depression and fibromyalgia. Milnacipran HCl belongs to biopharmaceutical class I having short elimination half-life. Milnacipran HCl recommended immediate release [IR] dose 50mg twice a day associated with frequent dosing which cause side effects, lack of patient compliance and discontinuation of therapy. To overcome such problems, the aim of the present study was to design novel once a day extended release multiparticulate system of Milnacipran HCl using Fluidized bed processor wurster coating technique. To achieve the goal, drug solution layering was done on seal coated #25 – 30 non pareil sugar spheres followed by release controlling polymer coating of Ethyl cellulose and Hydroxypropyl methyl Cellulose in the ratio 90:10 respectively. In vitro dissolution study of 10, 12, and 14% release controlling polymer coated pellets was carried in distilled water using USP type II dissolution apparatus with sinkers. Ratio of hydrophobic to hydrophilic polymer and level of coating have highest effect on drug release. Milnacipran HCl release extended for longer duration as percent of release controlling polymer coating increased. The release kinetics was explored and explained with zero order, first order, Higuchi and Korsmeyer equations. The drug release from pellets has no significant effect of pH of dissolution medium.

KEYWORDS: Milnacipran HCl, Extended release pellets, Ethyl Cellulose, Hydroxypropyl methyl Cellulose

INTRODUCTION:

Milnacipran HCl has been approved since 1997 for treatment of depression and also approved in January 2009 for treatment of fibromyalgia. Milnacipran HCl is commercially available as immediate release (IR) formulations in the form of tablets and capsules with dose of 12.5-100 mg.[1] U.S. Patent No. 6,602,911 to paillard states "for administration orally, the compounds may be formulated as a sustained release preparation" [3] However, patent does not describe diminishing locally and/or centrally mediated side effects.

Patent describes a prolonged release formulation of Milnacipran HCl with dosages ranging from 60-240 mg, in which 10-55% of the total dose is released within two hours between 40 and 75% in 4 hours, 70 and 90% in 8 hours and 80 and 100% of the dose released in 12 hours. Gautam Singhvi et al., worked on design and characterization of cost effective hydrophilic matrix tablets of Milnacipran HCl using Hydroxypropyl methylcellulose (HPMC).[4] Literature revealed that multi granules extended Release [ER] formulations are better in release control than conventional matrix of single granules.[5] It is also reported that a combination of hydrophilic and hydrophobic polymers in a matrix can better control the drug release than alone hydrophilic polymer for prolong time.[6] Hydrophobic polymers not only act as water repellent surface, but also provide several advantages, ranging from good stability at varying pH values and moisture levels to well established safe applications. Present work provides, once a day extended release multiparticulate pellets formulation of Milnacipran HCl which avoid higher peak plasma concentration, reduce drug plasma fluctuation which results in lesser side effects and improve therapeutic efficacy after twice a day IR tablet or capsule.

Free Radical Scavenging and Cytotoxic Potential of *Celosia argentea*

Rukhsana Abdul Rub*[1], Manohar Janardhan Patil[2], Areej Abdul Siddiqui[1], Priyanka Rambhau Ghorpade[1], and Alpana Subhod Moghe[3]

[1]*Department of Pharmacognosy, M.C.E. Society's Allana College of Pharmacy, Camp, Pune-411001, Maharashtra, India*
[2]*Department of Molecular and Cell Biology, MMM's College of Pharmacy, Kalewadi, Pimpri, Pune, Maharashtra, India*
[3]*Department of Molecular and Cell Biology, Rajiv Gandhi Institute of Biotechnology, Bharati Vidyapeeth University, Pune, Maharashtra, India*

ABSTRACT

Introduction: Oxidative stress due to reactive oxygen species often leads to pathogenesis of chronic diseases such as cancer. Research states that a diet rich in polyphenols renders many health benefits by scavenging such harmful reactive species. *Celosia argentea* (Amaranthaceae), a common weed in India has been reported as a potential source of cheap, natural antioxidants due to its phenolic abundance. In this research work efforts were made to identify and screen the phenolic rich fractions of *Celosia argentea* for their antioxidant and anticancer potential. **Materials and Methods:** Various solvent fractions with increasing polarity were subjected to total phenolic content, followed by antioxidant assays- DPPH, ABTS and anti proliferative assays- Brine shrimp Bioassay, Antimitotic and MTT assays. **Results:** IC_{50} value of methanolic fraction for DPPH assay was statistically significant (26.25; ***P<0.001) when compared with ascorbic acid (12.50; ***P<0.001). Also TEAC values for methanolic fraction and BHT (standard) for ABTS assay were similar (2.1; ***P<0.001) Methanolicfraction at 400 µg/ml exhibited strong cytotoxicity (9.0 ± 0.81; ***P<0.001) against brine shrimps comparable to Methotrexate at 50 µg/ml(10; ***P<0.001) and significantly reduced mitotic index from 96.8 to 38.0 (***P<0.001) which was further confirmed by MTT assay where IC_{50} value of methanolic fraction for SiHa and MCF-7 cells was found to be 28 µg/ml with no cytotoxicity to normal cells proving its anticancer potential. **Conclusion:** This research proves antioxidant and anticancer potential of phenolic rich fraction of *Celosia argentea* and suggests it to be useful in cancer management as antifroliferative, chemo preventive and in cancer chemotherapy induced immune suppression and oxidative stress.

Key words: Antioxidant, Brine shrimp, Mitotic index, MTT, Phenolics.

INTRODUCTION

Imbalanced metabolism and excess reactive oxygen species (ROS) generation end into development of oxidative stress leading to range of disorders such as cancer, diabetes, atherosclerosis, cardiovascular diseases, Alzheimer's, Parkinson's disease, aging and many other neural disorders. Toxicity of free radicals contributes to proteins and DNA injury, inflammation, tissue damage and subsequent cellular apoptosis. Antioxidants are now being looked upon as persuasive therapeutic as they have capability to combat by neutralizing free radicals.[1]

As the natural antioxidant defense mechanism becomes inefficient, dietary intake of antioxidant is important to replenish and regenerate antioxidants that are responsible for removal of free radicals, scavenging ROS or their precursors, and binding metal ions needed for catalysis of ROS generation.[2] Synthetic antioxidants like BHT and BHA have their accompanied unavoidable side effects like radio-sensitization, toxicity of other chemicals, mutagenicity, and tumor formation from chemical carcinogens.[1] Hence, there is a need to explore the nature and screen the medicinal plants as potent antioxidants. It is found that dietary polyphenols obtained from various herbs, spices, fruits and vegetables are found to possess anticancer effects via

*Corresponding author:
Prof. Rukhsana Abdul Rub
Head of Department (Pharmacognosy)
M.C.E. Society's Allana College of Pharmacy, Camp,
Pune-411001, Maharashtra, India.
Phone No: +91-9890937888
E-mail: hailrukhsar@yahoo.com

DOI: 10.5530/pj.2015.3.8

International Journal of Advanced Biotechnology and Research (IJBR)
ISSN 0976-2612, Online ISSN 2278-599X,
Vol 6, Issue 2, 2015, pp270-277
http://www.bipublication.com

Research Article

Immunomodulatory profile of *Celosia argentia*-Activity of Isolated compounds I and II

Rukhsana A. Rub*[1], Manohar J. Patil[2], Nasreen N. Shaikh[3],

Tasneem Shaikh[4], Jaleel Ahmed[5] and Areej A. Siddiqui[1],

[1]Department of Pharmacognosy,
Padmashree Dr. D. Y. Patil Institute of Pharmaceutical Sciences & Research
[2]MMM's College of Pharmacy,
Kalewadi, Pimpri, Pune, Maharashtra, India.
[3]Research methodology,
Z.V.M. Unani Medical College & Hospital, Azam Campus, Camp, Pune.
[4]Statistician- Management of Medical & Allied Data Systems, Pune.
*Corresponding Author: Email: hailrukhsana@yahoo.com,
Contact: +91-9890937888, Fax: 020-26442074

[Received-11/05/2015, Accepted-23/05/2015, Published-05/06/2015]

ABSTRACT:

Immunostimulation and immunosuppression both need to be tackled in order to regulate the normal immunological functioning.Immunomodulators not only boost immunity, but normalize it.Being safe,effective and pocket friendly,plant based immunomodulators can provide as alternatives or adjuvants to conventional drugs. The aerial parts of *Celosia argentea Linn.* a common weed found in Maharashtra are reported to be rich in flavonoids that are believed to play a significant role in body's defense mechanism.Hence the present study explores the effectiveness of the compound I-Luteolin7-O glycoside and compound II-1-(4-hydroxy-2-methoxyphenyl)furan-3-yl)-3-phenylpropane-1,3-dione obtained from the aerial parts of *Celosia argentea Linn.*Fresh whole plants of *Celosia argentea Linn.*were collected from Bhor, district-Pune, Maharashtra and dried in the shade at room temperature. The herbarium of the plant specimen was deposited and authenticated at Botanical Survey of India, Pune.Proximate analysis was done andPhysicochemical constants such as moisture content, ash value, extractive value and foreign organic matter were studied using standard methods. When both the isolated compounds I and II were tested for in vivo immunomodulatory activity using Mice Paw Sensitivity test, Phagocytic Index and HA Titre parameters, it was found that Compound I exhibited impressive immunomodulatory activity (***p<0.001) followed by compound II (**p<0.01), for all the three assays. Immunosuppressive state is involved in the etiology as well as pathophysiology of many neoplastic, inflammatory and autoimmune diseases. Thus, the present research work suggests that compounds I and II of aerial parts have a significant potential for immunoregulation and may be administered as alternativesor adjuvants to therapies requiring immunomodulation, , especially when the host defense mechanism has to be activated under the condition of impaired immune response in degenerative diseases.

Keywords:*Celosia argentea Linn.* Immunomodulator, Compound I, Compound II, Flavonoid

INTRODUCTION:

Immunomodulator is a substance that alters the immune response by augmenting or reducing the ability of the immune system. The substances showing such property are called as Immunomodulatory agents.Modulator given to someone with a healthy immune system will have

Saudi Journal of Biological Sciences
Volume 23, Issue 3, May 2016, Pages 420-425

Original article

Synthesis, characterization and evaluation of the suppression of insulin resistance in Type-II diabetes mellitus animals by treatment with metal complex

Mohini A. Phanse [a, b], Manohar J. Patil [c], Konde Abbulu [d]

[a] Modern College of Pharmacy, Nigdi, Pune, India
[b] Jawaharlal Nehru Technological University, Hyderabad, A.P., India
[c] Maratha Mitramandal College of Pharmacy, Kalewadi, Pune, India
[d] Mallareddy Institute of Pharmaceutical Sciences, Hyderabad, India

Received 4 July 2015, Revised 26 August 2015, Accepted 26 August 2015, Available online 2 September 2015.

https://doi.org/10.1016/j.sjbs.2015.08.017

Abstract

The present study is characterized toward thespesone isolation from *Thespesia populnea* (Malvaceae). Subsequently it was modified and characterized to study its effect on diabetes related symptoms. The complex is administered to diabetes induced mice with the doses of 5, 10 and 20 mg/kg, p.o. and the effect of complex on the level of body weight, lipid profile and blood glucose was studied after 22 days. The results have indicated that diabetic mice show a significant ($p < 0.01$) decrease in the level of serum triglyceride, plasma glucose and increase in body weight. Hence the present investigation reveals that newly synthesized c

Current Drug Therapy, 2015, *10*, 35-43

BENTHAM SCIENCE

Piper betle: A Promising Tool for Drug Permeation Enhancement of Naproxen Sodium Transdermal Gel Formulation

Sunetra K. Patwardhan[a,*], Manohar J. Patil[b] and S. Anbazhagan[c]

[a]*Department of Pharmacognosy, Sinhgad College of Pharmacy, Vadgaon(Bk), Pune, and Jawaharlal Nehru Technological University, Hyderabad, India;* [b]*Department of Pharmacognosy, Marathwada Mitramandal College of Pharmacy, Pimpri, Pune, India;* [c]*Department of Pharmaceutical Chemistry, Surya School of Pharmacy, Surya Nagar, GST Road, Vikravandi, Villupuram District, Tamil Nadu, India*

Abstract: ***Background***: Skin as route of administration avoids many side effects of oral administration of NSAIDS like irritation of the gastrointestinal tract, systemic toxicity and improves the patient compliance and therapeutic efficacy.

Objective: To study the influence of *Piper betle* on the permeation of Naproxen sodium gel when applied on skin.

Method: The leaves of *P. betle* were subjected to maceration using successive solvent extraction with solvents like n-hexane, chloroform, methanol and water. All four extracts were screened for preliminary phytochemical tests. The carbopol gel formulations containing Naproxen sodium (1% w/w) and selected concentrations (1% / 2% w/w) of synthetic penetrations enhancers or four herbal extracts were prepared as various batches. These formulations were subjected to characterization tests of colour, pH, viscosity, spreadability. Formulations were subjected to *ex-vivo* permeation of the drug across rat skin using Franz diffusion cell. The permeation using herbal extracts was compared with synthetic penetration enhancer, Transcutol P.

Results: The formulation containing 2% w/w of N- hexane extract showed better % cumulative release (47.97%) and flux (157.072 $\mu g/cm^2 h$), as compared to synthetic enhancer transcutol P (43.11% CR and flux as 141.15 $\mu g/cm^2 h$) and other extracts. Histopathology shows focal stripping of stratum corneum and normal adnexal structure in both formulations containing synthetic and n-hexane extract. But mild degeneration of epidermis and dermis was seen along with hemorrhage in skin treated with formulation containing Transcutol P.

Conclusion: *Piper betle* may be safer and better option for increasing the skin permeability of Naproxen sodium as compared to synthetic penetration enhancers.

Sunetra K. Patwardhan

Keywords: Anti-inflammatory activity, naproxen sodium, *Piper betle*, penetration enhancer, therapeutic enhancer, transdermal permeation.

INTRODUCTION

Most of the synthetic drugs and exciepients/ additives show adverse or toxic effects. Hence there is always need to tap new sources for safer and better options of medication in oral, parenteral as well as topical route. Currently, one can witness great resurgence of using alternative treatments and the increasing use of natural products, especially those obtained from herbs due to several reasons. There is a great interest and medical need for the improvement or modification of therapeutic effect of a large number of drugs which are

(a) frequently consumed by the people and showing some side effects on chronic use

(b) poorly bioavailable

(c) toxic and expensive.

(d) prone to undesired effect due to drug interaction [1].

The transdermal gel formulation offers many advantages over oral route of administration. Gel is composed of small amount of solids dispersed in

*Address correspondence to this author at the Sinhgad College of Pharmacy, 44/1, Vadgaon (Bk), Off Sinhgad Road, Pune- 411041, Maharashtra, India; Tel: +91-020-25425611;
Mobile: (+91) 09422910940/8007610944;
E-mail: sunetrapatwardhans@gmail.com

2212-3903/15 $58.00+.00

Pharmacognosy and Phytochemistry-I

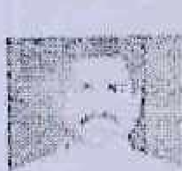
[An Experimental Handbook]

Ketan Wadekar

[illegible] Patil

About the Author

Mr. Raju Ratan Wadekar is presently working as an Assistant Professor (Pharmacognosy and Phytochemistry) at STES's Sinhgad Institute of Pharmaceutical Sciences, Lonavala, Pune. He is a graduate from SRA College of Pharmacy, [illegible], Post graduate in Pharmacognosy and Phytochemistry from KLE College of Pharmacy, Belgaum. He is currently pursuing Ph.D in Pharmaceutical Sciences from KLE University, Belgaum. Mr. Raju Wadekar was awarded Summer Research Fellowship by Indian academy of Sciences, Bangalore. He is a life member of APTI and has total 12 international and national publications to his credit.



[illegible] is presently working as Principal at Marathwada Mitra Mandal's College of Pharmacy, Pune. He is recognised Ph.D. Guide, University of Pune, JNT Tech University Hyderabad, Karpagam University, Coimbatore. Dr. [illegible] Paul honoured with Pharmacy Teacher of the Year [illegible] By 58th Indian Pharmaceutical Congress Trust, Pune. And also honoured as "Adarsh Shikshak Puraskar" by Saswad Municipal Corporation, Saswad Dist. Pune. He has guided more than 28 post graduate students and 8 Ph.D students. He has published more than 30 research papers in well reputed international and national journals.

₹ 125.00

ISBN 978-93-[illegible]

AHUJA PUBLISHING HOUSE

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Patrons

Prof. M. N. Navale
Founder President
Sinhgad Technical Education Society, Pune

Dr. (Mrs.) Sunanda M. Navale
Founder Secretary
Sinhgad Technical Education Society, Pune

Mr. Rohit M. Navale
Vice President
Sinhgad Technical Education Society, Pune

Mrs. Rachana Navale - Ashtekar
Vice President
Sinhgad Technical Education Society, Pune

Organising Committee

Dr. V. B. Gaikwad
Director, BCUD

Dr. R. G. Jaybhaye
O.S.D. / BCUD

Dr. K. N. Gujar
Principal, Sinhgad College of Pharmacy
Convener

Ms. Manisha Phoujdar
Professor, Sinhgad College of Pharmacy
Co-ordinator

Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Pune-411 033

Sinhgad Institutes

Savitribai Phule Pune University
Board of College and University Development (BCUD)

INNOVATION 2015

Regional Research Conference
June 29 -30, 2015
(Faculty of Pharmaceutical Sciences)

Special Invitees :

Dr. W. N. Gade
Vice - Chancellor, SPPU

Dr. P. D. Chaudhary
Dean, Pharmacy Faculty

Organised by

Sinhgad Technical Education Society's

SINHGAD COLLEGE OF PHARMACY

44/1, Vadgaon (Bk.), Sinhgad Road, Pune - 411 041.
Tel. : 020 - 24354720 Email : scop@sinhgad.edu www.sinhgad.edu

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

This is to certify that Dr./ Shri./ Smt. Pramod Liladhar Ingale

of MMM's College of Pharmacy, PCMC, Pune participated and presented

paper / poster entitled Development and validation of RP-HPLC method for determination of Anti hypertensive drugs in Biological Fluids. in the

Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers

in the subject Pharma. Chemistry held at Sinhgad College of Pharmacy

on 29-30 June 2015

Coordinator

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Maratwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

This is to certify that Dr./ Shri./ Smt. Pravin Janardhan Patil
of Marathwada Mitra Mandal's College of Pharmacy, Pune participated and presented
paper / poster entitled Development & Validation of Animal Models for Screening of Pro-convulsant activity of Drugs. in the
Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers
in the subject Pharmacology held at Sinhgad College of Pharmacy
on 29-30 June 2015

Coordinator Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

This is to certify that Dr./ Shri./ Smt. Prasad Vijay Kadam
of Marathwad Mitra Mandal's College of Pharmacy, Pune participated and presented
paper / poster entitled Identification & Screening of Bioactive fraction of Strychnous potatorum for its antidiabetic activities in the
Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers
in the subject Pharmacognosy held at Sinhgad College of Pharmacy
on 29-30 June 2015

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy
Estd. 2006
Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

SAVITRIBAI PHULE PUNE UNIVERSITY
(Formerly University of Pune)

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

Certificate of Participation

This is to certify that Dr./ Shri./ Smt. Mukesh Pandurang Ratnaparkhi
of Marathwada Mitra Mandal's college of pharmacy, pune participated and presented
paper / poster entitled Design and Evalnation of Targated delivery of Gefitinib using polyethyleneglycolated Multiwall carbon Nanotube.
Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers
in the subject Pharmaceutics held at Sinhgad College of Pharmacy
on 29-30 June 2015

Coordinator

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy • Thergaon, Pune-33 • Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

This is to certify that Dr./ Shri./ Smt. Rahul Hari Khiste

of Marathwada Mitra Mandal's College of Pharmacy participated and presented paper / poster entitled Design, Synthesis & Biological Evaluation of some Novel Triazolo-oxadiazole derivatives in the Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers in the subject Pharma. Chemistry held at Sinhgad College of Pharmacy

on 29-30 June 2015

Coordinator

Dr. Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

BOARD OF COLLEGE & UNIVERSITY DEVELOPMENT (BCUD)

INNOVATION - 2015

REGIONAL RESEARCH CONFERENCE

This is to certify that Dr./ Shri./ Smt. Anuradha M Arvind Ranpise
of Marathwada Mitra Mandal's College of Pharmacy, Pune participated and presented paper / poster entitled Development of Self Micro-emulsifying Drug Delivery System for Enhancing the Gastrointestinal Absorption of Poorly Soluble Drug in the Regional Research Conference "INNOVATION - 2015" for Savitribai Phule Pune University College Teachers in the subject Pharmaceutics held at Sinhgad College of Pharmacy on 29-30 June 2015

Coordinator
Ravindra G. Jaybhaye
O.S.D. / BCUD

Principal

Dr. Vishwas Gaikwad
Director, BCUD

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Dr. D. Y. Patil Pra[illegible]ithan's

Padmashree Dr. D. Y. Patil College of Pharmacy,

Sector- 29, Akurdi, Pune-411044

Organized &

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE), NEW DELHI

Sponsored Two days National Conference On

"Quality by Design in Pharmaceuticals"

CERTIFICATE

This is to certify that Dr./Mr./Ms./Mrs. Sachin K Jagdale has participated in All India Council Technical Education (AICTE) sponsored two days National Conference on "Quality by Design in Pharmaceuticals" conducted on 16th and 17th July 2015 as a resource person/ evaluator/ delegate/ member of Organizing Committee. His / Her active participation in this program is deeply appreciated.

Co-ordinator

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Convener and Principal

APTICON-2015

20th Annual National Convention of Association of Pharmaceutical Teachers of India

Organized by: Pharmacy Institutions of Madhya Pradesh

"Strategic Approaches to Strengthen Academic & Industrial Collaboration"

9th – 11th October 2015, Indore

Certificate of Participation

It gives us immense pleasure to certify that

Dr. Manohar J.Patil

participated in APTICON-2015 held at DAVV Auditorium, Takshashila Campus, Indore (M.P.)

during 9th to 11th October 2015.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Prof. Piyush Trivedi
LOC Chairman

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Anil Kharia
Organizing Secretary

APTICON-2015

20th Annual National Convention of Association of Pharmaceutical Teachers of India

Organized by: Pharmacy Institutions of Madhya Pradesh

"Strategic Approaches to Strengthen Academic & Industrial Collaboration"

9th – 11th October 2015, Indore

Certificate of Participation

It gives us immense pleasure to certify that

Mr. Rahul H. Khiste

participated in APTICON-2015 held at DAVV Auditorium, Takshashila Campus, Indore (M.P.)

during 9th to 11th October 2015.

Prof. Piyush Trivedi
LOC Chairman

Marathwada Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033

Prof. Anil Kharia
Organizing Secretary

APTICON-2015

20th Annual National Convention of Association of Pharmaceutical Teachers of India

Organized by: Pharmacy Institutions of Madhya Pradesh

"Strategic Approaches to Strengthen Academic & Industrial Collaboration"

9th – 11th October 2015, Indore

Certificate of Participation

It gives us immense pleasure to certify that

Mr. Shailendra S.Salvankar

participated in APTICON-2015 held at DAVV Auditorium, Takshashila Campus, Indore (M.P.)

during 9th to 11th October 2015.

Marathwada Mitra Mandal's College of Pharmacy Estd. 2006 Thergaon, Pune-33

Prof. Piyush Trivedi
LOC Chairman

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kale...), Pune-411 033

Prof. Anil Kharia
Organizing Secretary

INDIA-MUMBAI
Established July 2015

ISPOR India-Mumbai Chapter

This is to certify that

Mr. Praveen Janardhan Patil

has participated at First Conference of

Pharmacoeconomics & Outcomes Research

ACE Seminar Hall, Bombay College of Pharmacy, Kalina, Mumbai on January 31st 2016

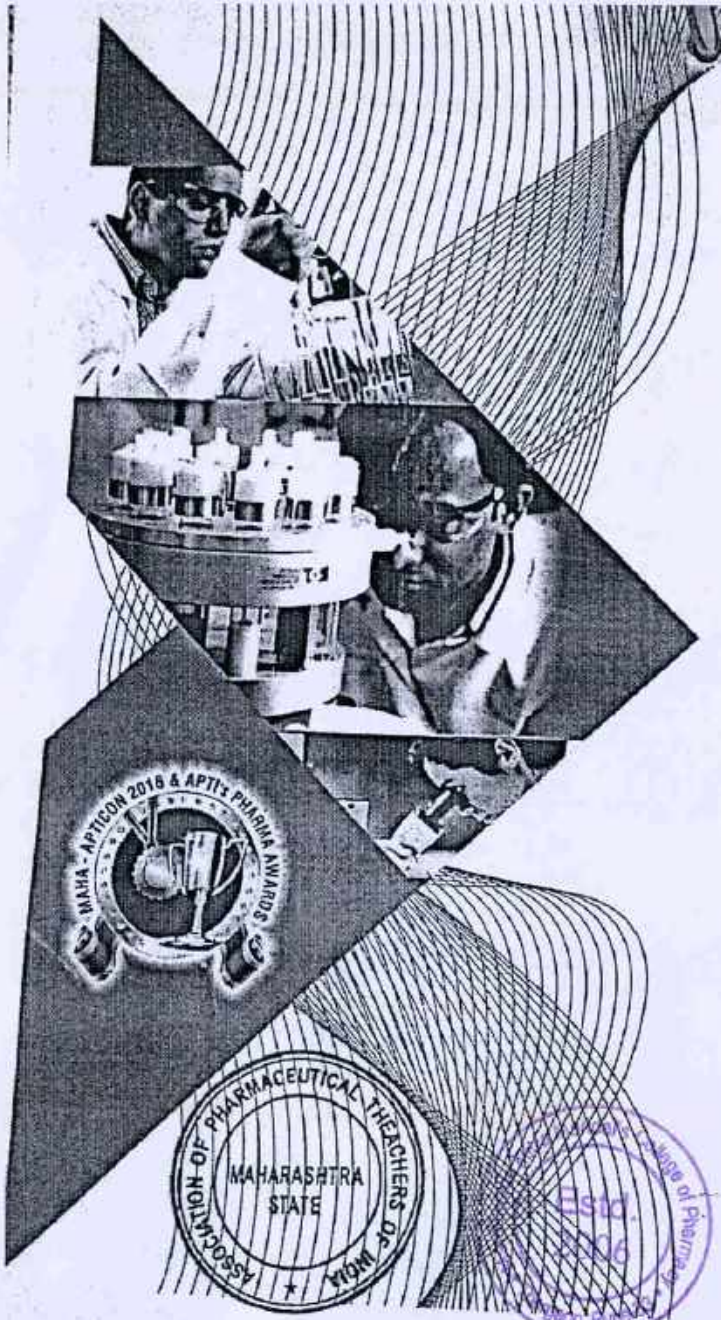
Dr. Amit Dang
President

Mahendra Rai
President-elect

Organizing Committee - ISPOR India - Mumbai Chapter

Marathwada Mitra Mandal's College of Pharmacy * Thergaon, Pune-33 * Estd. 2006

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033



MAHA-APTICON 2016
& APTI-MS PHARMA AWARDS

Annual Convention of Association of Pharmaceutical Teachers of India,
Maharashtra State Branch

Certificate

This is to certify that

Pro./Dr./Mr./Ms./Mrs. MANOHAR G. PATIL

has participated in

MAHA-APTICON 2016 & APTI-MS PHARMA AWARDS

Annual Convention of Association of Pharmaceutical Teachers of India,
Maharashtra State Branch

on 20th March 2016,
at St. Charle's Centenary Auditorium, Nagpur

ORGANIZED BY
ASSOCIATION OF PHARMACEUTICAL TEACHERS OF INDIA
(Maharashtra State)

Dr. Milind Umekar	Dr. Anil Pethe	Dr. Mohamed Dehghan	Dr. Sohan Chitlange
President	Vice-President	Vice-President	Secretary

PRINCIPAL
Marathwada Mitra Mandal's
COLLEGE OF PHARMACY
Thergaon (Kalewadi), Pune-411 033