



Annual report of the Department of Pharmaceutical Chemistry

AY July 2017- June 2018

Department of Pharmaceutical Chemistry Faculty

Dr. Tabassum Khan, Ms. Vasanti Suvarna, Dr. Atul Sherje, Dr. Kavatkumar Patel, Dr. Dr. Bhushan Dravyakar and Dr. Arati Prabhu (even semester only).

This report summarizes the various activities of the Dept. of Pharmaceutical Chemistry for the Academic Year 2017-18.

1. Academic activity

- The faculty was involved in taking lectures and laboratory sessions as per their workload and timetable for the AY 2017-18.
- The faculty conducted focus group sessions with the slow learners and diploma students in the subjects of organic chemistry and pharmaceutical chemistry. They conducted tutorials, quiz and assignments to gauge the student understanding of the coursework.
- Student mentorship and career guidance activities were conducted on a need basis for the UG and PG students.
- The faculty actively conducted various examination related activities viz. University of Mumbai paper setting, paper correction, paper moderation, paper revaluation.

2. Extra-academic/ Extra-curricular activity

- The dept. faculty is an integral part of many college committees. As a part of these committees they participated in committee meetings, resolved issues, maintained documentation and reports of the same.
- They were actively involved in NBA activities including compilation of NBA files (AY 2016-17 and 2017-18) and preparation of supporting documents, collection and collation of data on various courses.
- The faculty played an active role in organization of various events like guest lectures, seminars, conference and workshop.

3. Research activity

The department faculty is actively involved in research activities including publications and research proposal submissions.

Publications/Patents/Books/Book chapters

Faculty	Title of the paper/ Name of the journal/ Publication date/ Impact factor
Dr. Tabassum Khan	1. "DNA gyrase inhibitors: Progress and synthesis of potent compounds as antibacterial agents", Biomedicine & Pharmacotherapy 103 (2018) 923–938. Thomson Reuters Impact factor- 2.759. 2. "Targeting Tumor Microenvironment to Curb Chemoresistance via Novel Drug Delivery Strategies", Expert Opinion on Drug Delivery , accepted for publication. Thomson Reuters Impact factor- 5.657.



	<ol style="list-style-type: none">3. PhytoNanotechnology: Enhancing delivery of plant based anti-cancer drugs, Frontiers in Pharmacology–Ethnopharmacology, Thomson Reuters Impact factor- 4.400.4. “Imidazole and pyrazole: Privileged scaffolds for anti-infective activity”, Mini Reviews in Organic Chemistry, accepted for publication in fourth issue of 2018. Thomson Reuters Impact factor- 1.095.5. “Phytochemicals and PI3K Inhibitors in Cancer—An Insight”, Frontiers in Pharmacology–Ethnopharmacology, December 2017, Volume 8, Article 916, Thomson Reuters Impact factor- 4.400.6. “Recent advances in delivery of antifungal agents for therapeutic management of candidiasis”, Biomedicine and Pharmacotherapy, 96 (2017) 1478–1490, Thomson Reuters Impact factor- 2.759.7. “Analytical method development and validation studies of ticagrelor tablets by RP-HPLC”, International Journal of Applied Pharmaceutics, 9(04), 2017, p 10-21.8. “Analytical method development and validation studies for the estimation of aspirin, clopidogrel bisulphate and rosuvastatin calcium in fixed dose combination capsule by UV spectroscopy”, Indian Drugs, 54(06), 2017, p 43-47.
Ms. Vasanti Suvarna	<ol style="list-style-type: none">1. DNA gyrase inhibitors: Progress and synthesis of potent compounds as antibacterial agents. Biomedicine & Pharmacotherapy 103 (2018) 923–938. Thomson Reuters Impact factor-2.759.2. "Host-guest interaction study of Efavirenz with hydroxypropyl-β-cyclodextrin and l-arginine by computational simulation studies: Preparation and characterization of supramolecular complexes." Journal of Molecular Liquids 259 (2018): 55-64. Thomson Reuters Impact factor 3.7.3. "Study on effect of L-arginine on solubility and dissolution of Zaltoprofen: Preparation and characterization of binary and ternary cyclodextrin inclusion complexes." Chemical Physics Letters (2018). Thomson Reuters Impact factor 1.84. "Mannose-conjugated curcumin-chitosan nanoparticles: Efficacy and toxicity assessments against Leishmania donovani." International Journal of biological macromolecules (2018). Thomson Reuters Impact factor 3.7.5. "HPLC Estimation, Ex vivo Everted Sac Permeability and In Vivo Pharmacokinetic Studies of Darunavir." Journal of chromatographic science (2018). Thomson Reuters Impact factor 0.98.6. “Phytochemicals and PI3K Inhibitors in Cancer—An Insight”, Frontiers in Pharmacology–Ethnopharmacology, December 2017, Volume 8, Article 916, Thomson Reuters Impact factor- 4.400. <p>Books</p> <ol style="list-style-type: none">1. Gastrointestinal Patch System-An Overview. Lambert Academic Publishing House; ISBN: 978-620-2-02195-1.



	<ol style="list-style-type: none">2. Development of anti- diabetic formulations with cyclodextrins. Lambert Academic Publishing House; ISBN: 978-620-2-02188-3.3. HPLC Method for estimation of Polyherbal formulation. Lambert Academic Publishing House; ISBN: 978—3-330-01332-2
Dr. Atul Sherje	<ol style="list-style-type: none">1. DNA gyrase inhibitors: Progress and synthesis of potent compounds as antibacterial agents. Biomedicine & Pharmacotherapy 103 (2018) 923–938. Thomson Reuters Impact factor- 2.759.2. "Host-guest interaction study of Efavirenz with hydroxypropyl-β-cyclodextrin and l-arginine by computational simulation studies: Preparation and characterization of supramolecular complexes." Journal of Molecular Liquids 259 (2018): 55-64. Thomson Reuters Impact factor 3.7.3. Study on Effect of L-Arginine on Solubility and Dissolution of Zaltoprofen: Preparation and Characterization of Binary and Ternary Cyclodextrin Inclusion Complexes” Chemical Physics Letters. (2018) Thomson Reuters Impact factor- 1.8.4. Development and Evaluation of pH-Responsive Cyclodextrin-Based in situ Gel of Paliperidone for Intranasal Delivery. AAPS PharmSciTech, 19, 1, 384–394. Thomson Reuters Impact factor- 2.451.5. Cyclodextrin-based nanosponges: A critical review, Carbohydrate Polymers 173 (2017) 37–49. Thomson Reuters Impact factor- 4.811.6. Forced degradation studies of tizanidine hydrochloride and development of validated stability indicating RP-HPLC method, Indian Drugs.
Dr. Kavithkumar Patel	<ol style="list-style-type: none">1. DNA gyrase inhibitors: Progress and synthesis of potent compounds as antibacterial agents. Biomedicine & Pharmacotherapy 103 (2018) 923–938. Thomson Reuters Impact factor- 2.759.2. Study on Effect of L-Arginine on Solubility and Dissolution of Zaltoprofen: Preparation and Characterization of Binary and Ternary Cyclodextrin Inclusion Complexes” Chemical Physics Letters. Thomson Reuters Impact factor- 1.8.3. “Imidazole and pyrazole: Privileged scaffolds for anti-infective activity”, Mini Reviews in Organic Chemistry, accepted for publication in fourth issue of 2018. Thomson Reuters Impact factor- 1.095.
Dr. Bhushan Dravyakar	<ol style="list-style-type: none">4. DNA gyrase inhibitors: Progress and synthesis of potent compounds as antibacterial agents. Biomedicine & Pharmacotherapy 103 (2018) 923–938. Thomson Reuters Impact factor-2.759.5. Cyclodextrin-based nanosponges: A critical review, Carbohydrate Polymers 173 (2017) 37–49. Thomson Reuters Impact factor-4.811.



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Research projects submitted/sanctioned

Faculty	Title of the project	Name of the funding agency/PI/CI	Submission date/Outcome
Dr. Tabassum Khan	1. "In-silico drug design, synthesis and pharmacological evaluation of Balicatib analogs as modulators of Cathepsin K inhibitors for the treatment of osteoporosis"- (Rs.27,00,000)	DST-SERB/CI	July 28, 2017/Declined after stage 2.
	2. "Synthesis, development and efficacy studies of chlorotoxin functionalized hollow gold nanoparticles for therapy of glioblastoma"- Rs. 2456800.	DST-SERB/CI	Sanctioned Rs. 24.57 lacs
	3. DST-FIST 2017 program (Financial assistance requested – Rs. 1,06,84,010) for improvement of Science and Technology infrastructure in higher educational institution- PG college Level 0	DST/ PI	Sanctioned Rs. 100 lacs
	4. Neuroconference grant	DST SERB, ICMR and CSIR	Sanctioned Rs 1.8 lacs
	5. "Fortified Nutraceuticals of <i>Acacia nilotica</i> pods, - A healthy product for geriatric patients"- Rs. 18,80,000.	RGSTC/PI	Sanctioned Rs. 18.80 lacs
	6. "Development of Nanoemulgel for arthritic inflammation and pain based on ethnomedicinal plants of western India"- Rs. 17,42,000.	RGSTC/CI	Sanctioned Rs. 17.42 lacs
Dr. Arati Prabhu	Foldscope platform for screening of potential anticancer compounds,	DBT/PI	Sanctioned Rs. 8.0 lacs



Ms. Vasanti Suvarna	1. "Ligand-conjugated Ultrathin Polyelectrolyte Capsules for Targeted Drug Delivery via Pulmonary route in the treatment of Visceral Leishmaniasis- Rs.42,20,000)	DST-SERB/CI	July 31, 2017/Declined
Dr. Kavatkumar Patel	1. "In-silico drug design, synthesis and pharmacological evaluation of Balicatib analogs as modulators of Cathepsin K inhibitors for the treatment of osteoporosis"- (Rs.27,00,000)	DST-SERB/PI	July 28, 2017/ Declined after stage 2

Conferences/Seminars/Workshops/FDP

Faculty	Name of the event	Attended/Presented	Dates
FDP			
Dr. Tabassum Khan	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec04-09, 2017, at BNCP, Mumbai
Dr. Arati Prabhu	One week Faculty development program on Topic: A comprehensive induction on best practices for effective teaching learning process.	Attended	May 07-12, St. Johns, 2018, Mumbai
	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec04-09, 2017, at BNCP, Mumbai
Ms. Vasanti Suvarna	One week Faculty development program on Topic: A comprehensive induction on best practices for effective teaching learning process.	Attended	May 07-12, St. Johns, 2018, Mumbai
	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec04-09, 2017, at BNCP, Mumbai
Dr. Atul Sherje	One week FDP on "Excipients: An uncharted	Attended	Jan 05-10, 2018



	roadmap towards Healthcare Technology".		At SSPSPTM, Mumbai
	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec 04-09, 2017, at BNCP, Mumbai
Dr. Kavatkumar Patel	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec04-09, 2017, at BNCP, Mumbai
Dr. Bhushan Dravyakar	One week FDP on "Screening Methods in Pharmacological Research"	Attended	Dec04-09, 2017, at BNCP, Mumbai
Conferences			
Dr. Tabassum Khan	<ul style="list-style-type: none"> • IPSCON 2018, Mumbai • IASTAM, DPSRU, New Delhi • "Three Days National Conference on Neurodegenerative Diseases: Strategies of Drug Discovery and Delivery to the Brain". 	Presented 01 paper Invited talk Organizing Secretary	Feb 15-17, 2018 Feb 02-04, 2018 July 27-29, 2018
Ms. Vasanti Suvarna	"Three Days National Conference on Neurodegenerative Diseases: Strategies of Drug Discovery and Delivery to the Brain".	Attended	July 27-29, 2018
Dr. Atul Sherje	"Three Days National Conference on Neurodegenerative Diseases: Strategies of Drug Discovery and Delivery to the Brain".	Attended	July 27-29, 2018
Dr. Kavatkumar Patel	"Three Days National Conference on Neurodegenerative Diseases: Strategies of Drug Discovery and Delivery to the Brain".	Attended	July 27-29, 2018
Dr. Bhushan Dravyakar	"Three Days National Conference on Neurodegenerative Diseases: Strategies of Drug Discovery and Delivery to the Brain".	Attended	July 27-29, 2018



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Workshops			
Dr. Tabassum Khan	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai
Dr. Arati Prabhu	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai
	One day workshop on Orientation of Foldscope	Attended	April 17, 2018, ICGEB, New Delhi
Ms. Vasanti Suvarna	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai
Dr. Atul Sherje	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai
Dr. Kavalkumar Patel	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai
Dr. Bhushan Dravyakar	Two days workshop On "Rational drug design: Fundamentals, pitfalls and way ahead"	Attended	May 18-19, 2018 at BNCP, Mumbai

Faculty appraisal

Faculty	Total API (AY 2017-18)	API breakup I+II+III	Appraisal date
Dr. Tabassum Khan	460.5	175+34+251.5	May 31, 2018
Dr. Arati Prabhu	255	177+37+41	May 31, 2018
Ms. Vasanti Suvarna	386	155+34+197	May 31, 2018
Dr. Atul Sherje	311.5	173+35+103.5	May 31, 2018
Dr. Kavalkumar Patel	182	104+28+50	May 31, 2018
Dr. Bhushan Dravyakar	280	180+48+52	May 31, 2018



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SVKM Management support-Faculty welfare/appreciation

Faculty	Conference/ Workshop/Seminar support (Rs)	Research/ Publication incentive (Rs)
Dr. Tabassum Khan	5000 (IPSCON)	10000+12500+25000= 47500
Dr. Arati Prabhu	-	-
Ms. Vasanti Suvarna	-	10000+5000=15000
Dr. Atul Sherje	2000	12500+4166+12500+5000=34166
Dr. Kavatkumar Patel	-	5000
Dr. Bhushan Dravyakar	-	12500

Research activity summary

Research head	Number
Research projects sanctioned	05 04- Dr. Tabassum Khan (02-PI and 02 as CI) 01-Dr. Arati Prabhu (PI)
Research projects submitted	09
Publications	18
Total impact factor of dept.	45.09
Books/book chapters	03
Patent (provisional)	-

Prepared by

Dr. Tabassum Khan

June 02, 2018