

**AL SHIFA COLLEGE OF PHARMACY**  
**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY**  
**ANNUAL REPORT FOR ACADEMIC YEAR 2017-18**



The academic year 2017-18 exhibited a variety of momentous events that were initiated and executed by the Pharmaceutical Chemistry Department. The constant involvement, dedication, co-operation and professionalism of all the faculty members and supporting staff need great accolades. Last year Alshifa College of Pharmacy got NBA accreditation, which involved the active participation of our fraternity in the entire process of NBA accreditation. The department of Pharmaceutical Chemistry has also approved as a **Research Centre** under KUHS, Thrissur for pursuing PhD in Pharmaceutical Chemistry. 2017-18 marked the commencement of two new pharmaceutical Chemistry laboratories, making now seven laboratories.

In the following, we shall summarize some of the key initiatives, as well as describe some of the major accomplishments that have been achieved over the past year.

### **Faculty**

The department has eight permanent faculties, of which 4 holds Ph.D Degree and others are pursuing their Doctoral program from reputed National Universities.

### **Result**

It is a proud moment to announce that the department has markedly improved the pass percentage of in all Pharmaceutical chemistry related subjects for Diploma and Degree courses. The results of 2016-17 were higher than the previous years in almost all related subjects. The P.G students continue to excel with 100% result in University Examination.

### Result Analysis for B.Pharm (Academic Year 2017 - 20 18)

S. No.	Subject	No. of Students Registered	No. of Students Appeared	No. of Students Passed				Percentage of Result
				Distinction	First Class	Second Class	Total	
<b>FIRST SEMESTER B.Pharm</b>								
1.	Pharmaceutical chemistry-I	100	100	15	40	16	82	<b>82.00 %</b>
2.	Pharmaceutical Analysis	100	100	17	39	13	88	<b>88.00 %</b>
<b>SECOND YEAR B.Pharm</b>								
3.	Pharmaceutical chemistry-III	99	98	16	32	05	53	<b>71.42%</b>
5.	Applied Biochemistry & molecular biology	99	98	10	28	14	52	<b>78%</b>
<b>THIRD YEAR B.Pharm</b>								
6.	Pharmaceutical chemistry-IV	100	100	15	35	22	72	<b>72%</b>
<b>FINAL YEAR B.Pharm</b>								
7.	Pharmaceutical chemistry-V	100	82	10	26	03	39	<b>78.6%</b>

### Result Analysis for M.Pharm

S. No.	Subject	No. of Students Registered	No. of Students Appeared	No. of Students Passed				Percentage of Result
				Distinction	First Class	Second Class	Total	
1.	Pharmaceutical Analysis	02	02	02	0	0	02	<b>100 %</b>
2.	Medicinal chemistry	02	02	02	0	0	02	<b>100 %</b>
3.	Advanced organic chemistry	02	02	02	0	0	02	<b>100 %</b>
4.	Chemistry of natural product	02	02	02	0	0	02	<b>100 %</b>

### Result Analysis for Pharm D

**Academic Year 2017 - 20 18**

S. No.	Subject	No. of Students Registered	No. of Students Appeared	No. of Students Passed				Percentage of Result
				Distinction	First Class	Second Class	Total	
<b>FIRST YEAR Pharm D.</b>								
1.	Pharmaceutical Inorganic chemistry	30	30	07	06	17	30	<b>100 %</b>
2.	Pharmaceutical Organic chemistry	30	30	07	06	17	22	<b>100 %</b>
3.	Medicinal Biochemistry	30	29	07	06	16	29	<b>100 %</b>
<b>THIRD YEAR Pharm D.</b>								
4.	Medicinal chemistry	30	30	10	07	13	30	<b>100 %</b>

**Research Publications**

The faculty of the department published **21** research articles in peer reviewed National and International Journals during the academic year 2017-18 with a Cumulative impact factor (Thomson Reuters) of 15

1. **Rasheed Arun**, Yalavarthi PR, Cherampambil H, Peesa JP, Abdul Khareem A. Synthesis and Pharmacological Evaluation of Acrylate-Based Gastrosparring NSAID Prodrugs. *Archiv der Pharmazie*, (Weinheim). 2017, 350(3-4). doi: 10.1002/ardp.201600325. Epub 2017 (**Impact factor.2.02**)
2. Vadlamudi HC, Yalavarthi PR, **Rasheed Arun**, In vitro characterization studies of self-microemulsified bosentan systems. *Drug Dev Ind Pharm*. 2017, 43 (6):989-995.doi: 10.1080/03639045.2017.1287720. Epub 2017 Feb 16 (**Impact factor.2.241**)
3. JP Peesa, PR Yalavarthi, **A Rasheed**, VBR Mandava, A perspective review on role of novel NSAID prodrugs in the management of acute inflammation, 2016, *Journal of Acute Disease* 5 (5), 364-381.
4. KR Vandana, Prasanna Raju Yalavarthi, Harini Chowdary Vadlamudi, Jagadesh Kumar Yadav Kalluri, **Arun Rasheed**, Process, Physicochemical Characterization

and In-Vitro Assessment of Albendazole Microcrystals, *Adv Pharm Bull*, 2017, doi: 10.15171/apb.2016.000

5. Peesa JP, Atmakuri LR, Yalavarthi PR, Mandava Venkata BR, **Arun Rasheed** A, Pachava. Oxaprozin prodrug as safer nonsteroidal anti-inflammatory drug: Synthesis and pharmacological evaluation. *Arch Pharm Chem Life Sci*. 2017; 18. <https://doi.org/10.1002/ardp.201700256>
6. Vadlamudi, H.C., Yalavarthi, P.R., Nagaswaram, T. **Arun Rasheed**, Peesa JP. J. Pharm. Investig. (2018). In-vitro and pharmacodynamic characterization of solidified self microemulsified system of quetiapine fumarate. *Journal of Pharmaceutical Investigation*. <https://doi.org/10.1007/s40005-018-0397-1>
7. **Sanal Dev.** Synthetic Approaches to Various Class of Topoisomerase II Inhibitors, *Mini-Reviews in Organic Chemistry*" (accepted manuscript May 2017, Ref BSP-MROC-2016-322) (**I.Factor: 1.3**)
8. **Sanal Dev.** Pharmacophore Based 3D-QSAR Analysis of Thienyl Chalcones as a New Class of Human MAO-B Inhibitors. Investigation of Combined Quantum Chemical and Molecular Dynamics Approach, *J. Phys. Chem. B*, 2017, J. Phys. Chem. B, 2017, 121 (6), pp 1186–1203 (**I.Factor: 3.4**)
9. **Sanal Dev.** Discovery of new class of methoxy carrying isoxazole derivatives as COX-II inhibitors: Investigation of a detailed molecular dynamics study, *Journal of Molecular Structure*, 2018, 1157, 19-28.
10. **Sanal Dev.** Virtual Combinatorial Library Design, Synthesis and In vitro Anticancer Assessment of -2-Amino-3-Cyanopyridine Derivatives, *Combinatorial Chemistry & High Throughput Screening*, 2018, 21, 1-11
11. **Sanal Dev.** Refining the Structural Features of Chromones as Selective MAO-B Inhibitors: Exploration of Combined Pharmacophore-Based 3D-QSAR and Quantum Chemical. *Chemistry Select*, 2018, 2, (35), 11645-11652.
12. **Sanal Dev.** Novel HDAC8 Inhibitors: A Multi-Computational Approach, SAR and QSAR in Environmental Research, 2017, 28 (9), 707-733.
13. **Balan P.**, HPTLC Fingerprinting of Ethyl acetate Extract of *Cynoglossum Zeylanicum* (Boraginaceae), *European Journal of Biomedical and Pharmaceutical Sciences* (2018) Volume: 5 Issues: 3 Page 901-906.
14. **Balan P.**, Impact of Modified Vesicular Drug Delivery Systems on Ploy herbal Formulation for Challenging Ailments, Bioequivalence & Bioavailability International Journal. 2017, Volume 1, Issues 2, Page 109.

15. **Jemi Jacob, Neethu Varghese , Shebina P Rasheed** “Recent Advances in the Synthesis of Isoquinoline and its Derivatives: A Review” ,*World Journal of Pharmacy and Pharmaceutical sciences* , Volume 5 issue 7, Page 1821-1827
16. **Neethu Varghese, Jemi Jacob, Mythri M, Nija B** “Synthesis of Thiazole derivatives: A Review”, *World Journal of Pharmacy and Pharmaceutical sciences*, Volume 5 issue 11, Page 624-636.
17. **Karthika. S, K.Girija, Nisha Mathew** entitled on Synthesis, Characterization and Evaluation of Anti-Oxidant and Anthelmintic Activity of Substituted Mannich Base Aryl Imidazole Derivatives, *World Journal of Pharmaceutical Research* Volume 5, Issue 5, 1018-1025.
18. **Shebina P Rasheed** and Murugesh Shivashankar, Synthesis and characterization of Shanku bhasma-an antiulcer herbomineral formulation. *Materials Science and Engineering* 263 (2017) 022026 doi:10.1088/1757
19. **Shebina P Rasheed**, M Shivashankar, Preparation and Characterization of Metal Oxide as Nano Particles -Varatika Bhasma, *Mechanics, Materials Science Engineering Journal, Magnolithe* (9), 2017.
20. **Shebina Rasheed**, Sanal Dev, Remya, Jemi Jacob, Smitha Rani, Determination of Esomeprazole by Complexation Method, *Der Pharma Chemica*, 9(22):101-105, 2017.
21. **Shebina Rasheed**, Preparation and Characterization of Calcium Based Indian Traditional Drug: Varatika Bhasma-Herbomineral. *Journal of Computational and Theoretical Nanoscience* 24(8):5931-5935, August 2018.

### **Awards and Honours**

- Dr. Arun Rasheed received ‘**Best Pharmacy Teacher Award 2017**’ from Kerala State Pharmacy Council, Trivandrum during November 2017.
- Dr. Arun Rasheed published a book on ‘**Amino acid prodrugs of Nonsteroidal Anti inflammatory Drugs**’ by LAP LAMBERT Academic Publishing, Mauritius. ISBN No: 978-620-2-06017-2
- Dr. Arun Rasheed is elected as prestigious **Fellow of Institution of Chemist (F.I.C), Kolkatta**.
- Dr.Sanal Dev selected as the **member, Board of studies for pharmaceutical science (PG) KUHS** for a period of three years.
- Dr.Sanal Dev become the **member of Prestigious American Chemical Society membership**, New York USA.
- Shebina P Rasheed secured Second prize for the oral presentation on "Comparative evaluation of shankha bhasma–A herbo mineral Formulation under drug discovery

process and Phytomedicine" Research day 2017 at Amrita school of Pharmacy, Amrita Vishwa Vidyapeetham, Amrita University, Kochi on March 2017.

### **Presentations in National and International Conferences**

1. Dr.Arun Rasheed presented research paper on ‘Synthesis and characterization of biodegradable macromolecular prodrug of NSAIDS’ on **Research day 2017**, held at Amrita school of Pharmacy, Amrita Vishwa Vidyapeetham, Amrita University, Kochi on March.
2. Dr. Arun Rasheed presented research paper on Brain targeting aminoacid Pro-drug of dexibuprofen as Neuro-protective agents: Synthesis, characterization and pharmacological evaluation at **National Symposium on Biomaterial Scaffolds: "Recent Advances and Challenges** on March 2017 at St James College of Pharmaceutical Sciences, Chalakudy
3. Dr.Sanal Dev presented research paper on **Exploring the advances and challenges in Green and Protein Chemistry: Industry and Academia perspectives”** 9<sup>th</sup> &10<sup>th</sup> March 2018 organized by the Department of Pharmaceutical Chemistry, JSS College of Pharmacy, Ooty.
4. Dr. Balan presented poster on HPTLC Terpenoids fingerprint profile of ethyl acetate extract of *Cynoglossum Zeylanicum*, **National seminar on recent advancements in the management of Psychiatric Disorders** Sponsored by AICTE, New Delhi at Al shifa college of Pharmacy on 3<sup>rd</sup>- 4<sup>th</sup> Nov 2017.
5. Dr. Balan presented poster on Synthesizing substituted Benzimidazole Derivatives for Anti Tubercular Activity. **International seminar on Herbals and Natural products for liver and Pancreatic disorders** sponsored by AICTE, New Delhi at Al shifa college of Pharmacy on 24<sup>th</sup>-25<sup>th</sup> Nov 2017.
6. Dr. Balan presented poster on HPTLC Steroid Fingerprint profile of ethyl acetate extract of *Cynoglossum Zeylanicum* **International seminar on Herbals and Natural products for liver and Pancreatic disorders** sponsored by AICTE, New Delhi at Al shifa college of Pharmacy on 24<sup>th</sup>-25<sup>th</sup> Nov 2017
7. Dr. Balan presented poster on Anti-Inflammatory Effect of *Amaranthus Hybridus* Ethanol Extract In Rats. **Research Day 2017** at Amrita College of Pharmacy on march 17<sup>th</sup>-18<sup>th</sup> March 2017.

8. Dr. Jemi Jacob presented a research paper on "Synthesis and biological evaluation of isoquinoline derivatives for their anti-inflammatory agents" for the "**Research Day 2017**" held during 17th & 18th March 2017 organized by Amrita School of Pharmacy.
9. Shebina P. Rasheed presented research paper on **International conference on Biomaterials Bioengineering and biothernotics[BIOMET 2018]** held at VIT Vellore, INDIA during 24-28 July.
10. Shebina P. Rasheed presented research paper on **National seminar on Bioanalytical Method development: Quality by design Approach** organized by St. James College of Pharmaceutical Sciences Chalakkudy on 10<sup>th</sup> Nov.2017
11. Shebina P. Rasheed presented poster on Treatment of biowaste to pharmaceutical excipient in the **International conference on Biomaterials Bioengineering and biothernotics [BIOMET 2018]** held at VIT Vellore, India during 24-28 July.
12. Shebina P. Rasheed presented poster Preparation and comparative evaluation of varatika Bhasma in **International seminar on Herbals and Natural Products for Liver and Pancreatic Disorders** held at Al Shifa college of Pharmacy on 24-25<sup>th</sup> Nov.2017.
13. **Visakha Rajan**, M.Pharm student, presented research paper on 'Synthesis and characterization of biodegradable macromolecular prodrug of NSAIDS', Research day 2017 Held at Amrita school of Pharmacy, Amrita Vishwa Vidyapeetham, Amrita University, Kochi on March 2017.
14. **Swathi**, M.Pharm student, presented research paper on "Synthesis and pharamacological evaluation of mutual prodrugs of aceclofenac/quarctine as gastro sparing NSAIDs" Research day 2017 held at Amrita School of Pharmacy, Amrita Vishwa Vidyapeetham, Amrita University, Kochi on March 2017.
15. **Archana P.S, Farhana K.C, Ayishathul Fasma, Fathimath Yasira, Febina.K**, Fourth year B.Pharm students, presented "An attempt to prepare calcium tablet from egg shell' for the "RESEARCH DAY 2017" held during 17<sup>th</sup> & 18<sup>th</sup> March 2017 organized by Amrita School of Pharmacy.

#### **Invited lecture**

1. Dr.Sanal Dev delivered lecture on '*Development of Screening Protocol for Drug Repositioning Using Insilico Tools*', during **Research Day 2017** at Amrita School of Pharmacy on 17<sup>th</sup> & 18<sup>th</sup> March 2017.

### **Faculty Continuing Ph.D**

The following faculty members of our department have registered for **Ph.D** at Annamalai University, Chidambaram.

1. Ms. Mythri. M
2. Mrs. Nija. B
3. Mrs.Shebina P. Rasheed

### **Approved PhD guides**

1. Dr. Arun Rasheed and Dr.Sanal Dev are appointed as approved Guide for Annamalai University, Annamalai Nagar, Chidambaram
2. Dr. Arun Rasheed and Dr.Balan approved as PhD guide in Pharamaceutical sciences, KUHS Thrissur.
3. Dr. Arun Rasheed approved as PhD guide in JJTU Rajasthan.