Dr. Ajinkya Ajit Patravale [M.Sc., Ph.D.]

Permanent Address: 692 'E' ward flat no 202 Ishwara Appts. Shahupuri 3rd Iane Near Patki Hospital, Kolhapur-416001 E-mail: <u>ajinkya1030@gmail.com</u> Cell: +91-9921111030 Male, born on October 19, 1986, Unmarried

Languages known: English, Hindi, Marathi (Write, Read, Speak)



Career Objectives:

To develop career in teaching and research where, I can work in innovating & challenging environment in the field of discovery of new chemical entities, and share my experimental skills of **organic synthesis and analytical chemistry, medicinal chemistry** (drug discovery and development) for superior growth of institute and country.

<u>Highlights</u>

A self-motivated result oriented organic chemist in designing and executing multicomponent syntheses to construct from simple organic to bioefficient heterocycles. Nature inspired highly potent, drug-like active lead compounds was designed and synthesized involving synthetic, medicinal and computational chemistry, structural biology. Strong understanding of Virtual Screening, SAR, and Pharmacophore modeling, ADME towards the structure based drug design. Well awareness and handling structure drawing software with chem draw, ISI draw, etc. Good communication potential with excellent relationship management and collaborative skills. Presently working on synthesis anti-cancer, anti HIV molecules which are selectively react with targeted disease and study the toxicity of synthesized indeno coupled nitrogen heterocycles on normal cells. Presently handling of analytical instruments NMR 300Hz–(Bruker), IR (Perkin Elmer FT-100, JASCO) and structural elucidation of synthesized compounds is carried out.

<u>Research Experience:</u>

- Nov 2014 to July 2015 worked as a DST-PURSE Research Assistant at Department of Chemistry, Shivaji University, Kolhapur.
- April 2014 to Jan 2014/April 2011 to March 2013 worked as a Senior Research Fellow (SRF) / Junior Research Fellow (JRF) on the Major Research Project funded by UGC (Amt. Rs. 8, 69,800/-) entitled, "Synthesis, Characterization and Bioactivity of Nitrogen Containing Heterocycles" at Department of Chemistry, Shivaji University, Kolhapur.

Exploring the applicability Knoevenagel, Michael and Friedländer condensation reactions and study the mechanistic chemistry behind the new synthetic multicomponent methodology, study the structures of N-containing heterocycles by spectroscopic techniques and find out the application of synthesized molecules in biomedical field. In this work, reported trouble free multi-component methods to synthesize nitrogen containing heterocyclic derivatives such as Indenopyrimidine, Indenopyridines, Indenospiro compounds and Indenoqunolines tackling the subject of drug design from different viewpoints such as computational, physico-chemical parameters, cell based assay and morphological cellular apoptosis.

Teaching experience

- **Working as** *online Tutor* **for chegg India. pvt. Ltd since last 3 years.** To solve the online questions of organic chemistry.
- ➡ Working as Assistant professor at Department of Chemistry, Vivekanand College, Kolhapur since [6th Jan 2016 to till date].

To delivered Lectures and practical's for B.Sc Chemistry and M.Sc. Organic chemistry students.

- Working as Assistant professor and Head at Department of Chemistry, Mahaveer College, Kolhapur since last 1st Aug 2016 to till date].
- 🖊 To delivered Lectures and practical's for B.Sc Chemistry students

Worked as a Contributory Teacher at Department of Industrial Chemistry, Shivaji University, Kolhapur since last 4 Years [1st June 2011 to 31st Dec 2015].

To delivered Lectures and practical's for M.Sc I and II Industrial chemistry students

Educational Qualification:

- **Oct 2015 Ph. D.** in Organic Chemistry entitled thesis, **"Synthesis, Characterization and Bioactivity of Nitrogen Containing Heterocycles"** from Shivaji University, Kolhapur.
- **2010 M.Sc** in Industrial Chemistry (**First Class with distinction, 72%**), Department of Chemistry, Shivaji University, Kolhapur.
- 4 2008 B.Sc in Chemistry (First Class, 69.32%), Rajaram College, Shivaji University, Kolhapur
- 2004 H.S.C (Phy, Chem, Bio, Maths Marathi ,English) from Kolhapur board having got 55.30% (Second Class)
- 2002 S.S.C (Marathi, Sanskrit, English, Maths, Science, Social Science) from Kolhapur board having got 65.06% (First Class)

🖊 <u>Experimental techniques /Instruments handled</u>

Good practice of synthesis of bioactive molecules.

Experience in organic synthesis with proven synthetic problem solving skills

Purification of solvents, starting materials, products through distillation, recrystallization and column chromatography methods, preparation of single crystals

Primary knowledge of drug-like properties and their significance in drug design.

Expertise in mining scientific databases: SciFinder, science direct, ACS, RSC society, PubMed.

Well understanding and proficient research scholar experience of drug discovery in therapeutic areas like anticancer, anti HIV, anti-microbial.

Well awareness with all aspects governing R&D activities and up-to-date knowledge of latest technological developments, regulations/ guidelines (GMP/GLP) in the industry.

Hands on handling of instruments NMR 300Hz-(Bruker), IR (Perkin Elmer FT-100 and JASCO 4600)

Industrial Experience:

Dec 2010 to March 2010 worked as a *Research Assistant (R &D)* at Konduskar Pharma, Kolhapur We develop economically feasible, safe, efficient and qualified process for the synthesis of anticancer molecule mycophenolic moftil (API). To develop a process for production from gram level to commercialization, and to solve the trouble shooting problems and scale up problems on pilot level. Documentation related to development report, Literature survey

Hay 2010 to Dec 2010 worked as a *Trainee Analyst (QC)* at Cipla Ltd Mumbai, India.

Mobil phase preparation. Sampling of raw material (excipients and API), finished products and packaging material. Pack line inspection of finished product. Review of intimation documents for correctness of details.

List of Publications:

Publication: 20, citation: 87, h- index: 06, I-index: 05

1 Ajinkya A. Patravale, Anil H. Gore, Govind B. Kolekar, Madhukar B. Deshmukh, Prafulla B. Choudhari, Manish S. Bhatia, Shivadatta Prabhu, Mahendra D. Jamdhade, Milind. S. Patole, Prashant. V. Anbhule Synthesis, Biological Evaluation and Molecular Docking Studies of Some Novel Indenospiro Derivatives as Anticancer Agents (I.F. = 2.8) Elsevier *J Taiwan Inst of Chem Engi* 2016, 68, 105-118. doi.org/10.1016/j.jtice.2016.09.034 (Cited 06)

2 Ajinkya A. Patravale, Anil H. Gore, Dipti R. Patil, Govind B. Kolekar, Madhukar B. Deshmukh, Prafulla B. Choudhar, Manish S. Bhatia, Prashant V. Anbhule Contemporary Development in Sequential Knoevenagel, Michael Addition Multicomponent Reaction for the Synthesis of 4-Aryl-5-oxo-5*H*-indeno[1,2-*b*]pyridine-3-carbonitrile. Springer (I.F. =1.8) *Res Chem Intermed* 2016, *42*, 2919-2935. doi:10.1007/s11164-015-2187-y.

3 Ajinkya A. Patravale, Anil H. Gore, Dipti R. Patil, Govind B. Kolekar, Madhukar B. Deshmukh, Prashant V. Anbhule Trouble-Free Multicomponent Method for Combinatorial Synthesis of 2-Amino-4-phenyl-5-Hindeno[1,2-d]pyrimidine-5-one and Their Screening against Cancer Cell Lines. ACS (I.F. = 2.5) *Ind. Eng. Chem. Res.* 2014, *53*, 16568–16578. doi: 10.1021/ie5013618. (Cited 22)

4 Digambar Kumbhar, Dattatray Chandam, Reshma Patil, Sunetra Jadhav, Dayanand Patil, **Ajinkya Patravale**, Madhukar Deshmuk. Synthesis and Antimicrobial Activity of Novel Derivatives of 7-aryl-10-thioxo-7, 10, 11, 12 – tertahydro-9H-benzo[H] pyrimido [4,5-b] quinoline-8-one. **Wiley**, (IF=0.89) J. Heterocycl. Chem., 2018, 55/3, 692-698. Doi:10.1002/jhet.3089. (Cited 01)

5 Priyanka P Mohire, Reshma B Patil, Dattatraya R Chandam, Sunetra J Jadhav, **Ajinkya A Patravale**, Digambar R Kumbhar, Jai S Ghosh, Madhukar B Deshmukh. Low transition temperature mixtures prompted one-pot synthesis of 5, 10 dihydropyrimido [4, 5-b] quinoline-2, 4 (1H, 3H)-dione derivatives. **Springer (IF = 1.36)** *Res Chem Intermed*, **2017**, 43, 12, 7013- 7028. **doi: 10.1007/s11164-017-3033-1. (Cited 01)**

6 Dattatraya R. Chandam, Ajinkya Patravale, Sunetra. J. Jadhav, Madhukar B. Deshmukh Low melting oxalic acid dihydrate: Proline mixture as dual solvent/catalyst for synthesis of spiro [indoline-3, 9'-xanthene] trione and dibarbiturate derivatives. (IF=2.5) Elsevier J of Mol liquids, 2017, 240, 98-105. doi.org/10.1016/j.molliq.2017.05.070. (Cited 01)

7 Sunetra J. Jadhav, Reshma B. Patil, Digambar R. Kumbhar, **Ajinkya A. Patravale**, Dattatraya R. Chandam, Madhukar B. Deshmukh. Sulfamic Acid Catalyzed Atom Economic, Eco-friendly Synthesis of Novel 7-(Aryl)-10-thioxo-7,9,10,11-tetrahedro-6H-pyrimido-[5'4':5,6]pyrano[3,2-c]quinoline-6,8(5H)-dione and its Derivatives. **Wiley**, (IF=0.89) J. Heterocycl. Chem., 2017 54, 4, 2206–2215 doi: 10.1002/jhet.2807. (Cited 01)

8. Praffula. B. Choudhari, Ajinkya A. Patravale, Prajakta P Subramani, Shivaratna V Khare, Sujata P Choudhari, Siddharth P Phalle, Santosh S Kumbhar, Vikram S Kavade . Investigation on quantitative structure activity relationships of benzoylamino benzoic acid derivatives as B-ketoacyl-acyl carrier protein synthase iii (FABH) inhibitors, Marmara Pharmaceutcal Journal, 2017, 21, 3, ISSN : 1309-0801. doi: 10.12991/marupj.323292.

9 Sunetra J. Jadhav, Reshma B. Patil, Digambar R. Kumbhar, **Ajinkya A. Patravale**, Dattatraya R. Chandam, Madhukar B. Deshmukh Sulfamic Acid Catalysed Multicomponent Synthesis of 7-phenyl-7,12 dihydrobenzo(h)pyrido[2,3-b]naphthydrin 6(5H)-one Derivatives : A Green Avenue. **Springer (I.F. = 1.36)** *Res Chem Intermed.* **2016**, 43, 4, 2529-2543, **doi:10.1007/s1116401627782. (Cited 01)**

10 Sunetra J. Jadhav, Reshma B. Patil, Digambar R. Kumbhar, **Ajinkya A. Patravale**, Dattatraya R. Chandam, Madhukar B. Deshmukh Sulfamic Acid Catalysed Novel and Atom Economic Multicomponent Synthesis of 5-phenyl-2-thioxo-1,2,3,5-tetrahydro-4*H*-pyrimido[4,5-*d*][1,3]thiazolo[3,2-*a*]pyrimidin-4-one Derivatives. Bentham Science. **Bentham Science** *Current Green Chemistry*, **2016**, 3, 3, 227-234. **doi: 10.2174/2213346103666161115124757. (Cited 02)**

11 Dattatray R. Chandam, Abhijeet G. Mulik, Dayanad R. Patil, **Ajinkya A. Patravale**, Digambar R. Kumbhar, Madhukar B. Deshmukh Oxalic acid dihydrate and proline based low transition temperature mixture: an efficient synthesis of spiro [diindenopyridine-indoline] triones derivatives. (IF = 2.5) Elsevier *J of Mol liquids*, 2016, *219*, 573-578.doi.org/10.1016/j.molliq.2016.02.101. (Cited 12)

12 Santosh S. Undare, Navnath J. Valekar Ajinkya A. Patravale, Dattatraya K. Jamale Govind B. Kolekar, Madhukar B. Deshmukh, Prashant V. Anbhule One pot synthesis and *in vivo* biological evaluation of new pyrimidine privileged scaffolds as potent anti-inflammatory agents Springer (I.F. = 1.36) *Res Chem Intermed* 2016, 42/5, 4373-4386. Doi 10.1007/s11164-015-2281-1. (Cited 10)

13 Santosh S. Undare, Navnath J. Valekar, Ajinkya A. Patravale, Dattatraya K. Jamale Sunil S Vibhute, Laxman S Walekar, Govind B. Kolekar, Madhukar B. Deshmukh, Prashant V. Anbhule Synthesis, antiinflammatory, ulcerogenic and cyclooxygenase activities of indenopyrimidine derivatives Elsevier (I.F. = 2.4) *Bioorg. Med. Chem. Lett.*, 2016, 26/3, 814–818.doi.org/10.1016/j.bmcl.2015.12.088. (Cited 10)

14 Digambar Kumbhar, Reshma Patil, Dayanand Patil, Ajinkya Patravale, Dattatray Chandam, Sunetra Jadhav & Madhukar Deshmukh 2015, (±)-Camphor-10-Sulfonic Acid as Recyclable and Efficient Catalyst for the Synthesis of Some Novel Coumarin Derivatives (I.F.=0.9) *Synth Commun*, 2016, 46/1, 85-92. doi: 10.1080/00397911.2015.1121281. (Cited 04)

15 Digambar Kumbhar, Reshma Patil, Dayanand Patil, **Ajinkya Patravale**, Dattatray Chandam, Sunetra Jadhav, Dattatray Chavan, Prafulla Choudhari, Manish Bhatia, Madhukar Deshmukh Target Oriented Selective Synthesis of Antibacterial Active Tyrosinase Enzyme Inhibitor Coumarin Core Derivatives *Asian J. Research Chem*.**2015**, *8* (*8*), 511-520 **ISSN 0974-4169. (Cited 01)**

16 Sunetra J. Jadhav, Reshma B. Patil, Digambar R. Kumbhar, **Ajinkya A. Patravale**, Dattatraya R. Chandam, Madhukar B. Deshmukh DABCO promoted one pot efficient synthesis and antioxidant activity of 2-Amino-4-phenyl-5-oxo-5, 6dihydro-4*H*-pyrano [3,2-c]quinoline-3-carbonitrile derivatives *Int* .*J. Pharm Sci Rev and Res*, **2015**, *35/2*, 75-82. **ISSN 0964-044X**.

17 Reshma Patil, Digambhar Kumbhar, **Ajinkya Patravale**, Sunetra Jadhav Madhukar Deshmukh DBN catalyzed efficient synthesis and antioxidant activity of pyrano pyrimidine derivatives *Chemical Science Review and Letter* **2015**, *4/16*, 979-984. **(SJF-4.01) ISSN 2278-6783**.

18 Dipak S Gaikwad, Kedar A Undale, Dilip B Patil, **Ajinkya Patravale**, AA Kamble A task-specific biodegradable ionic liquid: a novel catalyst for synthesis of bicyclic ortho-aminocarbonitriles *Springer*, *J of the Iran Chemi Soc* **2018**, *15/5*, 1175-1180. (Cited 01)

19. Priyanka P Mohire, Dattatray R Chandam, Reshma B Patil, Digambar R Kumbhar, Sunetra J Jadhav, **Ajinkya Patravale**, Vijaya P Godase, Jai S Ghosh, Madhukar B Deshmukh Protic Ionic Liquid Promoted One Pot Synthesis of 2-amino-4-(phenyl)-7-methyl-5-oxo-4*H*, 5*H*-pyrano [4, 3-b] pyran-3-carbonitrile Derivatives in Water and Their Antimycobacterial Activity. **Wiley**, (IF=0.89) J. Heterocycl. Chem., 2018, 55/04 1010-1023.

20. Digambar Kumbhar, Dattatray Chandam, Reshma Patil, Sunetra Jadhav, Dayanand Patil, **Ajinkya Patravale**, Madhukar Deshmuk. Synthesis and Antimicrobial Activity of Novel Derivatives of 7-aryl-10-thioxo-7, 10, 11, 12–tertahydro-9H-benzo [H] pyrimido [4, 5-b] quinoline-8-one **Wiley**, (IF=0.89) J. Heterocycl. Chem., 2018,

21 Priyanka Mohire, Dattatray Chandam, Reshma patil, **Ajinkya Patravale**, Jai Ghosh, Madhukar Deshmuk Low Melting Mixture Glycerol: Proline as an Innovative Designer Solvent for the Synthesis of Novel Chromeno Fused Thiazolopyrimidinone Derivatives: An Excellent Correlation with Green Chemistry Metrics (IF = 2.5) Elsevier *J of Mol liquids*, (Accepted)

Papers Presented in Conferences/Workshops/Seminars:

- ➡ Oral presentation in National Conference on, "Recent Advances in Chemical and Environmental Science" held at Arya post graduate college, Panipath, Haryana on 27th-28th Feb 2015.
- **Poster presentation** in one day National Conference on, 'New Trends in Pest Management', held at Department of Agrochemicals and Pest Management, Shivaji University, Kolhapur held on 31st Jan. 2014
- Poster presentation in National Conference on "Current Trends in Chemical Sciences" held at Department of Chemistry, Shivaji University, Kolhapur on 17th and 18th Jan. 2014.

- Poster presentation in National Conference on "Current Research in Chemical Sciences" held at Department of Chemistry, Shivaji University, Kolhapur on 22nd and 23rd Jan. 2013.
- **Poster Presentation** in "National Seminar on "Recent Advances in Synthetic Chemistry and Nanomaterials" held at Department of Chemistry, Shivaji University, Kolhapur on 21st -22nd Jan. 2012

References:

Prof. (Dr.) P. V. Anbhule (M.Sc., Ph.D.) Professor in Organic Chemistry Department of Chemistry, Shivaji University Kop- 416004 E-mail:<u>pvanbhule@yahoo.co.in</u> Cell: +91-9423717717

Prof. (Dr.) M. S. Bhatia (M. Pharm. Ph. D)

Vice principal & Professor in Pharmachemistry

Department of Pharmaceutical Chemistry Bharati Vidyapeeth College of Pharmacy, Kop- 416013 E-mail: <u>manish bhatial3@yahoo.co.in</u>,

Date: / /

Place: Kolhapur

Prof. (Dr.) N. R. Karmalkar (M.Sc. Ph. D)

Vice Chancellor, Savitribai Phule University of Pune E-mail: <u>nrkarmalkar@gmail.com</u> Cell: +91-9823011747

Prof. (Dr.) G. S. Gokavi (M.Sc. Ph. D) Professor & Head Chemistry, Department of Chemistry, Shivaji University Kop- 416004

E-mail: <u>gsgokavi@hotmail.com</u> Cell:. 9422582658

Yours Faithfully,

(Dr. Ajinkya A Patravale)