



Sandesh D. Kate

OBJECTIVE

To obtain a position in a pharmaceutical/biotech/chemical drug industry using my extensive experience in synthetic organic chemistry.

Highlights

- Six months **Research Scientist**, In **BVG Life Sciences**, Pune
- One year As **Assistant Professor (Chemistry)** in **Sinhgad college of Science**
- Three year **Distinguished Scientist, Chief Scientist, Scientist – Ajorganica PVT Ltd**
- One year Experience - **Scientist** in contract research and R & D unit 5 -**Sai Advantium pharma Ltd**
- One year Experience **Associate scientist** in drug discovery and medicinal chemistry in **Aurigene discovery technologies Ltd**
- Experience in designing and synthesis of novel scaffolds for Medicinal Chemistry
- **Three years of post-doctoral academic experience in USA**
- Broad experience in synthetic organic chemistry including multistep organic synthesis
- Experience in bioorganic chemistry such as functionalization of lipid, and peptide chemistry
- Experience in natural products isolation, purification and characterization.

ACADEMIC QUALIFICATIONS

Degree /Examination	University /Institute	Year of Passing	Grade
S.S.C	Maharashtra state board	March 1990	First Class
H.S.C	Maharashtra state board	March 1992	Grade II
B. Sc (Chemistry)	Modern College Pune University	April 1995	I st class with Distinction
M. Sc (Organic Chemistry)	Poona College, Pune University	May 1997	I st class with Distinction
	M.Sc Project	Dr Sunil V Pansare	
	Project work in National Chemical Laboratory, Pune	Studies on Synthesis of Unsymmetrical 1,2-diarylethane diamines	
Ph. D (Chemistry)	Department of Chemistry, Pune University Pune- 411007 Maharashtra , INDIA	December 2004	
Area of Ph D research Synthetic Organic Chemistry : O-Alkylation, photochemistry, telomerization study on L-ascorbic acid (Vitamin-C)	Title of thesis	Studies Towards Application of L-ascorbic acid in Organic Synthesis	
	Thesis Advisor	Professor M. G. Kulkarni	
Post Doctorate March 2004- March 2007 NIH Fellowship	Department of Chemical and Biological Engineering Rensselaer Polytechnic Institute, Troy, NEW YORK, USA NY 12180	Professor Ravi S Kane	

Post Doctoral research area: Oligovalent and polyvalent Therapeutics against pathogens/bacterial toxins Bioorganic chemistry, Carbohydrate chemistry		Synthetic organic chemistry including multistep organic synthesis, Oligovalent and polyvalent polymer therapeutics against pathogens/toxins, divalent, tetravalent, pentavalent, hexavalent, heptavalent molecules, functionalization of lipid, biotinylated compounds, thiols , amines for biological study.

MERITS AND AWARDS/FELLOWSHIPS

- Postdoctoral fellowship- **National Institute of Health USA** - March 2004 – March 2007
- Junior Research Fellowship from **Defense Research Development Organization (DRDO)**, Pune to work on the project for synthesis of 3,3-Bisazidomethyl oxetane - January 1998 - June 1999.
- Junior and Senior Research Fellowship from **Council of Scientific and Industrial Research (CSIR)**, India, for carrying out Ph. D. research on L-ascorbic acid - January 2000 - December 2003
- Qualified **UGC-CSIR-NET** examination an all India level for **research** fellowship and **lectureship** in Chemical Sciences held on 20-6-99
- Qualified **SET** examination in **Chemistry for Lectureship** in Chemical Sciences held July 1999

ACADEMIC EXPERIENCE:

As Assistant Professor (Chemistry) from 16 Nov-2015- 1 Feb 2017 in Sinhgad college of Science, Pune

Institute	Duration	Position Held	Role/responsibilities-- UG/PG
Sinhgad College Of Science, Ambegaon, BK	Date of Joining 16 Nov-2015 to 1st Feb 2017	Assistant Professor	Semester IV T.Y.B.Sc- SUBJECT TAUGHT 1) Analytical Chemistry CH-344 2) Inorganic Chemistry(CH-342) 3) Environmental and Green Chemistry (CH-346 D)
			Practicals conducted with Co-instructor F. Y. B. Sc Practicals Organic and Inorganic chemistry-CH-113 T.Y. B. Sc Practicals CH-348, CH-349 (Inorganic and Organic Chemistry
			Semester III T.Y.B.Sc- SUBJECT TAUGHT 1) Industrial Chemistry (CH-335) 2) Environmental and Green Chemistry (CH-336 D)
			Practical's conducted Semester III F. Y. B .Sc Practicals Organic and Inorganic chemistry-CH-113
Pay Grade	15600 + 6000(AGP)	Pay Band	15600- 39100/

- Taught T.Y. B.Sc Chemistry Subjects for Semester III and IV and conducted practical's for F.Y. B. Sc and T. Y. B. Sc
- Actively Participated In FDP program in Sinhgad college of Science

- Conducted Chemistry practical for **B. Sc V-56 course (DIET- YCMOU)** batches
- Attended one week short training program on **Recent Advances in Nanomaterials , Nanotechnology And Nanofabrication, December 11-16, 2016** in Association with Defence Institute of Advanced Technology(DIAT) Pune- organized by Department of Mechanical Engineering , Smt.Kashibai Navale College of Engineering Pune- 41
- Attended National conference on **INNOVATIVE RESEARCH IN LIFE SCIENCE(IRLS-2016) on 26-27 Feb 2016** in Sinhgad college of Science, Ambegaon, BK-pune-41
- Was Official Review Committee In charge for The Proceedings–paper-abstract- Edit/Review **IRLS 2016**
- Editorial Board Member of Conference Proceedings **IRLS 2016**
- Junior supervisor for internal and external , Savitribai Phule Pune University Exam for academic year 2015-2016
- Internal examiner and Assistant expert In For B Sc chemistry- For F .Y .B Sc, S. Y .B .Sc and T.Y. B. Sc academic year 2015-2016
- Member for Criteria III for NAAC-Self Study report(SSR)-data preparation

RESEARCH EXPERIENCE Highlights

Industrial- 5yrs, Post-doctorate – 3 yrs Total – 8 yrs

Company	Duration	Position Held	Key role and responsibilities
Aurigene Discovery Technologies LTD, Bangalore	1 year 04/2007 to 03/2008	Associate Scientist	1)Design and synthesis of novel scaffolds with therapeutic value- anticancer and anti diabetic 2) team leader supervision and guidance of team 3)daily updates and weekly report to senior management
Sai Advantium Pharma Pune	1 year 05/2008 to 05/2009	Research Scientist	1)Contract research projects 2) supervision and guidance of team .daily updates and weekly report to senior management 3)FTE, PO based contract research projects
Ajorganica PVT LTD Pune	3 years 05/2011 to 05/2014	Distinguished Scientist Chief Scientist Scientist	1)Team leader for HIV, Hepatitis- inhibitor project and design, scaffold, purification 2)Natural product isolation and purification 3) synthesis of small molecules, gold nanoparticles destruct signal molecule 4) handling of multiple projects 5) Daily updates and weekly reports, monthly reports to senior management. 6) New natural product isolation, purification, characterization for hepatoprotective drugs. Scale up For animal toxicity and clinical trials
BVG Life Science PVT LTD Pune	Jan2020- June 2020	Research Scientist	New projects based on phytochemicals from indigenous plants Such as Ficus religiosa, ficus benghalensis, aegle Marmelos Planning of the projects, literature review and summary Practical extraction from ficus religiosa

RESEARCH EXPERIENCE DETAILED

- **Research Scientist – BVG life science Pune
January 2020- June 2020**
 - Literature search survey of assigned indigenous medicinal plants- Ficus religiosa, ficus benghalensis.
 - Other medicinal plants literature
 - Weekly update to HOD
 - Development of extracts of ficus religiosa and methods
- **Distinguished Scientist** Ajorganica Pvt Ltd, Hinjewadi pune, and JAIN-AJ organica Pharmaceutical Division Jalgaon

- January 2014 to May 2014**
 - Daily updates and weekly reports, monthly reports to senior management.
 - New natural product isolation, purification, characterization for hepatoprotective drugs
 - Overview production operation at jalgaon and plan, overview R&D work in pune
 - Production/isolation/scale up of India's first entry inhibitor for HIV -pure compound for animal clinical trials observation, study.
 - Development of new anti HIV, and hepatitis natural products based drugs
- Chief Scientist** Ajorganica Pvt Ltd, Hinjewadi pune, India
July 2013 to January 2014
 - Daily updates and weekly reports to senior management.
 - The work involves synthesis planning of molecules, for different diseases
 - Natural products compound isolation, purification, characterization for HIV, hepatitis, influenza,
 - Production/isolation/scale up of India's first entry inhibitor for HIV - pure compound for animal toxicity, clinical trials, observation, study.
- Scientist** , Ajorganica Pvt Ltd, Hinjewadi pune, India
May 2011 to June 2013
 - Supervision and Guidance to chemistry group.
 - Daily updates and weekly reports to senior management.
 - The work involves synthesis of destruct signal molecules, gold nanoparticles
 - Natural products compound isolation, purification, characterization for HIV
 - Development of India's first entry inhibitor for HIV
 - Graduation as partner level
- Research Scientist**, Sai Advantium Pharma Ltd, Unit 5, Hinjewadi, Pune, India
May 2008 – May 2009
 - Supervision and Guidance to chemistry group.
 - Daily updates and weekly reports to senior management.
 - The work involves synthesis of small molecules for different targets.
 - Project Management involving quotes generation
- Associate Scientist**, Aurigene drug discovery technologies Ltd, Bangalore, Karnataka, India
April 2007 – March 2008
 - The work involves design and synthesis of novel scaffold with therapeutical value.
 - Drug discovery experience in the therapeutic areas such as anticancer and antidiabetics.
 - Leading team of six research associates and their reporting to senior management.
 - Responsible for day to day activities of lab and troubleshooting.
- Postdoctoral Research Associate**, Prof. Ravi Kane, Rensselaer Polytechnic Institute, NY, USA
March 2006 – March 2007
 - Synthesis and characterization oligovalent inhibitors for anthrax toxin with defined valency and spacing using solid phase chemistry.
 - Synthesis and characterization of structure aided tetravalent inhibitors for anthrax toxin
 - Synthesis and characterization of functionalized lipids for synthesis of liposome based polyvalent inhibitors of anthrax toxin
 - Synthesis and characterization of different biotinylated compounds for studying protein-protein interactions
- Postdoctoral Research Fellow**, Prof. Ravi Kane, Rensselaer Polytechnic Institute, NY, USA
March 2005 - March 2006
 - Synthesis and characterization of different organic thiols for studying biospecific protein-protein interactions
 - Synthesis and characterization of structure aided cyclodextrin-polyethylene glycol based heptavalent inhibitors anthrax toxin
 - Synthesis and characterization of galactose based thiols for designing multivalent inhibitors of cholera toxin

PROFESSIONAL SKILLS

- **Research areas** : Organic Chemistry, Synthesis and characterization of small molecules and large molecules, development of new synthetic methods, bioorganic chemistry, carbohydrate chemistry, drug discovery, medicinal chemistry, Natural product- bioactives isolation and purification and characterization
- **Laboratory skills** : Extensive experience with various instrumental techniques such as UV-vis, FT-IR, NMR, GC, GC/MS and HPLC and data analysis
- **Computer Skills** : Chemistry related softwares (ChemWindows, Chemdraw, ISIS DRAW, Chem Builder, ACD Labs, Chems sketch), Data mining- Scifinder, MDL-Crossfire, ACS-CAS, CA ON CD, ISI web of science

PERSONAL SKILLS

- Strong communication skills, ability to perform individually as well as in interdisciplinary collaborations

PROFESSIONAL MEMBERSHIP

Was Member of American chemical society

PUBLICATIONS

1. Structure-based design of heptavalent anthrax toxin inhibitor – **Kate, S**; Joshi, A; Poon, V; Mondal, D; Boggara, M; Saraph, A; Martin, J; Mcalpine, R; Day, R; Garcia, A; Mogridge, J; Kane R S, *Biomacromolecules* **2011**, 12(3), 791-796.
2. An affinity-based strategy for the design of selective displacers for the chromatographic separation of proteins - Vutukuru, S; **Kate, S D**; McCallum, S A; Morrison, C J; Cramer, S M; Kane, R S, *Langmuir* **2008**, 24, 6768-6773.
3. Thiol-Mediated Anchoring of Ligands to Self-Assembled Monolayers for Studies of Biospecific Interactions - Gujraty, K; Bethi, S; **Kate, S**; Ashton, R; Faulkner, C; Jennings G. Kane; Kane, R S, *Langmuir* **2006**, 22, 10157-10162.
4. Statistical Pattern Matching Facilitates the Design of Polyvalent Inhibitors - Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; **Kate, S**; Tao, K; Mogridge, J; Kane, R S, *Nature Biotechnology*, **2006**, 24(5), 582-586.
5. Chemistry of L-ascorbic acid. Part IV.¹ Regioselective O-alkylation of 5,6-O- isopropylidene-L-ascorbic acid - **Kate, S D**; Kulkarni, M G, *Synthetic Communications*, **2004**, 34, 2365-2370.
6. Chemistry of L-ascorbic acid. Part 3.¹ Photoreduction of quinones with 5,6-O- isopropylidene-L-ascorbic acid - **Kate, S D**; Kulkarni, M G, *J. Chem. Soc., Perkin Trans. 1*, **2000**, 4242-4244.
7. Stereoselective synthesis of 3,4-disubstituted-1,2,5-thiazolidine-1,1-dioxide and their conversion to unsymmetrical vicinal diamines – Rai, A N; **Kate, S D**, Pansare, S V, *Synlett*, **1998**, 623.

SYMPOSIUM/WORKSHOP ATTENDED

- Attended one week short training program on **Recent Advances in Nanomaterials , Nanotechnology And Nanofabrication, December 11-16, 2016** in Association with Defence Institute of Advanced Technology(DIAT) Pune- organized by Department of Mechanical Engineering , Smt.Kashibai Navale College of Engineering Pune- 41
- Attended National conference on **INNOVATIVE RESEARCH IN LIFE SCIENCE(IRLS-2016) on 26-27 Feb 2016** in Sinhgad college of Science, Ambegaon, BK-pune-41
- National workshop on “Chemoinformatics” RASA life science informatics & Allard college of Pharmacy Mar. 2011, Pune, India
- National symposium on “Metals and Other elements in Organic Synthesis” Feb. 2002, Department of Chemistry, University of Pune, India
- National workshop on Multidimensional NMR spectroscopy, Jan 2003 Department of Chemistry, University of Pune, India
- Attended

PRESENTATIONS

- Vutukuru, S; Kate, SD; McCallum, SA; Morrison, CJ; Cramer, SM; Kane, RS, *A Rational Approach for Design and Synthesis of Selective Displacers for the Chromatographic Purification of Proteins*, AIChE Annual Meeting, Philadelphia PA, United states Nov 2008
- Joshi, A; Kate, S; Saraph, A; Mogridge, J; Kane, RS, *Heptavalent Inhibitors Of Anthrax Toxin*, AIChE Annual Meeting, Boston, Nov 2007
- Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; Kate, S; Tao, K; Mogridge, J; Kane, RS, *Design of potent liposome-based inhibitors of Anthrax toxin*, MRS Spring Meeting, Boston, MA, United States, Nov 2006
- Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; Kate, S; Tao, K; Mogridge, J; Kane, RS, *Design of potent liposome-based inhibitors of Anthrax toxin*, AIChE National Meeting, San Francisco, CA, United States, Sept 2006
- Kane, RS; Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; Kate, S; Tao, K; Mogridge, J; *Statistical pattern matching enhances the potency of polyvalent toxin inhibitors*. 232nd ACS National Meeting, San Francisco, CA, United States, Sept 2006
- Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; Kate, S; Tao, K; Mogridge, J; Kane, RS, *Design of potent liposome-based inhibitors of Anthrax toxin*, APS Meeting, Baltimore, MD, United States, Mar 2006
- Rai, P; Padala, C; Poon, V; Saraph, A; Basha, S; Kate, S; Tao, K; Mogridge, J; Kane, RS, *Design of potent liposome-based inhibitors of Anthrax toxin*, AIChE National Meeting, Cincinnati, OH, United States, Nov 2005

PERSONAL INFORMATION

Full Name	KATE (Last/surname)	SANDESH (First)	DNYANOBA (Middle)
Address for Correspondence	Dr Sandesh D Kate Sr NO 141/1, Fl-3 Vishwashanti colony NO 4 Pimple Saudagar, Near electica Homes Post – Aundh Camp, Pune- 411 027, Maharashtra, INDIA Ph.No.- 91-9763140625 e-mail : sandeshkate@yahoo.com .		
Permanent residential address	Sr NO 141/1, Fl-3 Vishwashanti colony No 4 Pimple Saudagar, Near electica Homes Post – Aundh Camp, Pune- 411 027, Maharashtra, INDIA		
Date of Birth	3 rd Oct.1974		
Nationality	Indian		
Sex	Male		
Marital Status	Married		
Languages	English, Marathi, Hindi		
Category	General-Open Hindu Maratha		