CURRICULUM VITAE

Prasanna Kumara Chikkade, Ph.D.

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PERSONAL DETAILS

Nationality	: Indian
Languages	: English, Kannada, Hindi, Telugu
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CAREER OBJECTIVE

Wish to pursue a research career in synthetic organic chemistry and effectively utilize my creativity and knowledge for substantial contribution to the progress of organic chemistry as well for the benefit of mankind.

EDUCATION

M. Sc. in Chemistry	University of Mysore, Mysore, Karnataka, India
B. Sc. (Physics, Chemistry, Mathematics)	University of Mysore, Mysore, Karnataka, India

AWARDS / FELLOWSHIPS

- **Research Fellowship** (2004-2008) awarded by Council of Scientific and Industrial Research, New Delhi, India, on the basis of **National Eligibility Test (NET)** 2002 in chemical sciences.
- Qualified **GATE (Graduate Aptitude Test for Engineers)** examination in 2002, organized by Ministry of Human Resource Development, Government of India.
- **ERATO Postdoctoral Fellowship** (January 2012-till date), Japan Science and Technology Agency (JST)

RESEARCH EXPERIENCE

2012 January -till date Postdoctoral Researcher	Laboratory of Synthetic Organic Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan ***Research work:*** "Transition metal-catalyzed asymmetric cascade reactions towards the syntheses of biologically active compounds"
2004-2011 Ph. D (Organic Chemistry)	Division of Organic Chemistry, National Chemical Laboratory, Pune-411008, Maharastra, India ***Title of the thesis****:* "Studies towards the total syntheses of *Aspidosperma* and *Nitraria* class of alkaloids: Syntheses of Vincadifformine, Sibirine and Isonitramine" **(*Prof. Ganesh Pandey*)**
2003 Research Scientist	Syngene International Pvt. Ltd. Biocon Group Bangalore, India.

ORAL AND POSTER PRESENTATIONS

- " Cascade Reactions Towards the Syntheses of Biologically Active Compounds" – *Oral presentation (October-2013) in Centre of Biomedical Research(CBMR), Lucknow,* ***India***
- "Copper-catalyzed Asymmetric Cascade Reaction towards the Synthesis of Structurally Diverse Biologically active Indole Scaffolds" *–Oral presentation in the Pharmaceutical Society of Japan annual meeting – March, 2013, Yokohama,* ***Japan****.*
- "Total Synthesis of (+)-Aspidospermine Employing Intramolecular (3+2) Cycloaddition of Non-stabilized Azomethine Ylide"- *Poster presentation in 116th International summercourse of BASF Se (August-2008) in Ludwigshafen,* ***Germany****.*
- "Total Syntheses of *Aspidosperma* and *Nitraria* Class of Alkaloids" *Poster presentation in National Science Day 2007 at National Chemical Laboratory, Pune,* ***India***

EXPERIENCE AND SKILLS

- Syntheses of biologically active *Aspidosperma* and *Nitraria* class of alkaloids and development of fascinating synthetically useful methodology in asymmetric catalysis.
- Syntheses of many drug intermediates [Chemical Company Biocon].
- Conversant with the multi step organic synthesis, purification and characterization of various organic compounds in milligram and multigram scale.

- Good experience in natural product synthesis, asymmetric catalysis and C-H bond activation.
- Expertise in preparation of *n*-BuLi and *s*-BuLi.
- Skilled in handling and interpretation of spectroscopic data of NMR, IR, Polarimeter, HRMS, LCMS, HPLC towards the characterization of unknown organic compounds.

RESEARCH INTERESTS

1. Activation and functionalization of inactive C–H bonds for efficient construction of complex molecules
2. Development of Cascade reactions and Multicomponent reactions involving generation of multiple chiral centres and multiple rings which could directly lead to biologically active compounds.
3. Development of novel methodologies in asymmetric organocatalysis or organometallic catalysis.
4. Enantioselective total synthesis of biologically active natural and unnatural products.

LIST OF PUBLICATIONS WITH ABSTRACTS

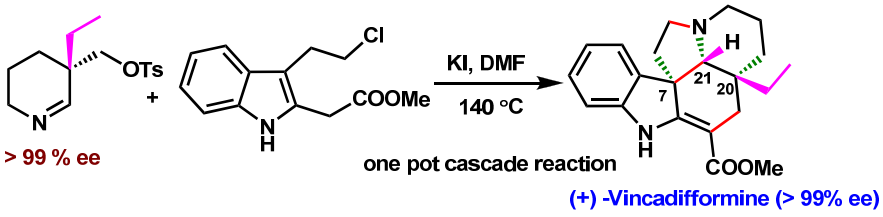
Doctoral research:

(1) Iminium Ion Cascade Reaction in The Total Synthesis of (+)-Vincadifformine

Ganesh Pandey* and **Prasanna Kumara C**

(***Organic Letters,* 2011,** *13*, 4672**;** http://dx.doi.org/10.1021/ol201892j**)**

Appeared in Top 10 Most Read Article in Q3 2011 from Organic Letters

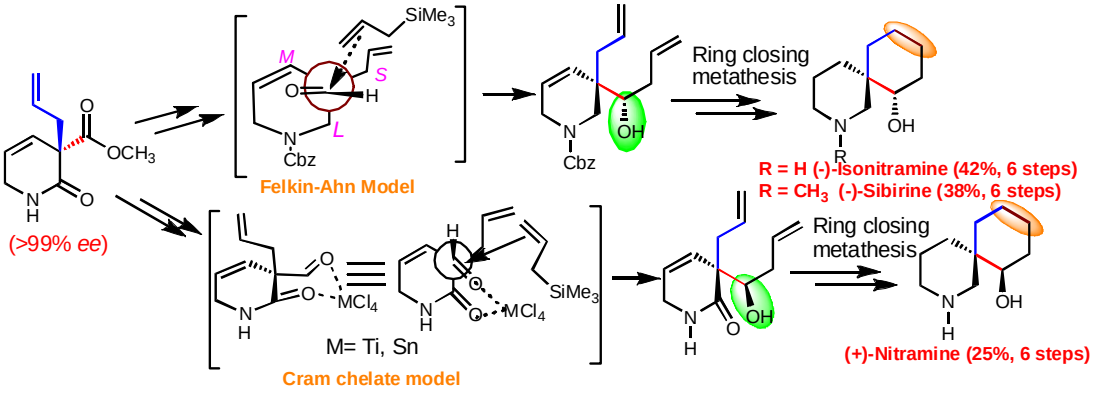


A convergent strategy for the total synthesis of (+)-Vincadifformine has been developed through iminium ion-triggered cascade reaction, which allows simultaneous construction of **two new rings**, **three new sigma bonds** and **two new stereogenic centers** in one pot with complete stereochemical control (35% yield, >99% *ee*)

(2) Enantioselective Total Syntheses of (-)-Isonitramine, (-)-Sibirine and (+)-Nitramine by Ring closing metathesis

Ganesh Pandey,* **Prasanna Kumara C,** Shiva Kumar Burugu, Vedavati. G. Puranik

(***Eur. J. Org. Chem.* 2011,** 7372); http://dx.doi.org/10.1002/ejoc.201101256**)**



Synthesis of (-)-Isonitramine, (-)-Sibirine and (+)-Nitramine

A **new**, **concise** and **efficient protocol** for the syntheses of deceptively simple looking optically pure (-)-Sibirine (38%), (-)-Isonitramine (42%) and (+)-Nitramine (25%) has been developed *via* diastereoselective allylation and ring closing metathesis reaction.

Postdoctoral research

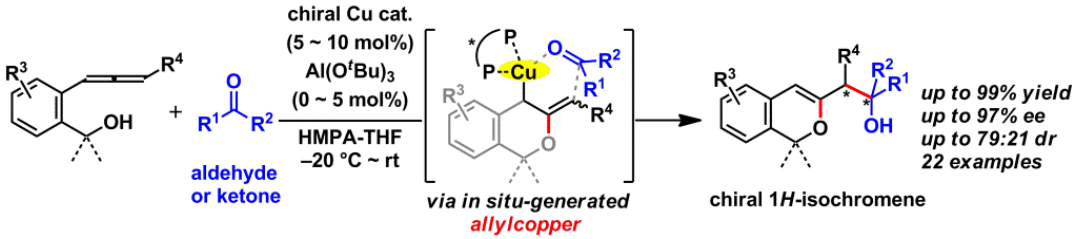
(3) In situ Catalytic Generation of Allylcopper Species for Asymmetric Allylation: Toward 1*H*-Isochromene Skeletons.

Junya Kawai,† **Prasanna Kumara Chikkade,**† Yohei Shimizu,* Motomu Kanai*

***Angew. Chem. Int. Ed.* 2013, *52*, 7177-7180**; **http://dx.doi/10.1002/ange.201302027/full**

(Highlights: Synfacts 2013, 9(10), 1080; DOI: 10.1055/s-0033-1339830**)**

† These authors contributed equally to this work

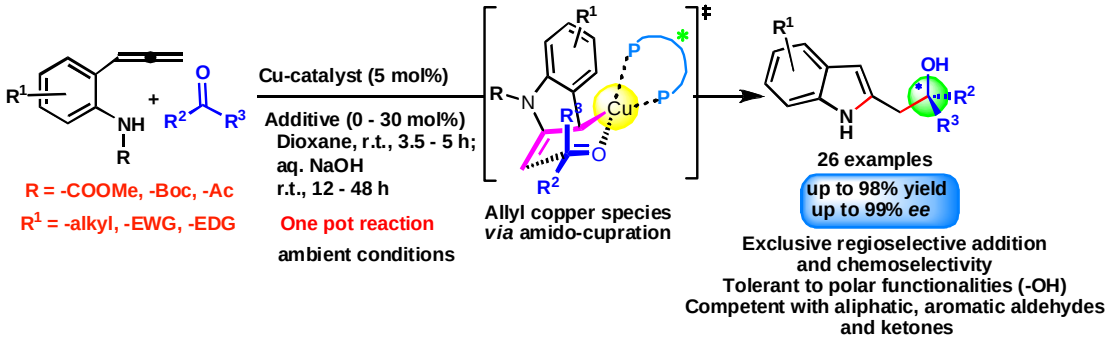


Allylcopper species can be generated *in situ* through catalytic intramolecular oxycupration of allenic alcohols. The thus-generated allylcopper intermediate can react with various aldehydes and a ketone to give 1*H*-isochromene derivatives in an enantioselective manner. This cascade protocol is atom-economical, highly regioselective, stereoconvergent and tolerant to existing free hydroxy groups. Further, the enantiomerically enriched 1*H*-isochromenes were successfully converted to more attractive and fascinating isochromane scaffolds in good diastereoselectivity.

(4) Catalytic Enantioselective Synthesis of 2-(2-Hydroxyethyl)indole Scaffolds *via* Consecutive Intramolecular Amido-Cupration of Allenes and Asymmetric addition of Carbonyl Compounds:

Prasanna Kumara Chikkade, Yohei Shimizu, Motomu Kanai*

(Manuscript submitted)



Cu(I)-catalyzed asymmetric cascade protocol has been developed to achieve 2-(2-hydroxyethyl)indole with high enantioselectivity *via* amido-cupration of allenyl anilides. This is the **first example** in which the **catalytic indole formation** is **coupled** with a **catalytic asymmetric C–C bond-formation** via *in situ* generation of reactive chiral allylcopper species.

REFERENCES

Prof. Dr. Ganesh Pandey, FNA, FNASc, FASc. Director Centre of Biomedical Research (CBMR) Sanjay Gandhi Post-Graduate Institute of Medical Sciences Campus Raebareli Road, Lucknow – 226014, Uttar Pradesh, India Tel.: +91-522-2668700, 2668800, 2668900 Ext.: 3034 Fax: +91-522-2668215 E-mail: gp.pandey@cbmr.res.in	**Prof. Dr. Pradeep Kumar** Scientist-G Division of Organic chemistry, National Chemical Laboratory, Pune- 411 008, India Phone: +91-20-25902050 (office). Fax: +91-20-25902629 E-mail: pk.tripathi@ncl.res.in	**Prof. Dr. Motomu Kanai** Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan. Tel: +81-3-5841-4830, Fax: +81-3-5684-5206, E-mail: kanai@mol.f.u-tokyo.ac.jp