

## Dr. KISHAN PRABHU HAVAL



- **PRESENT ADDRESS:**

**Dr. Kishan P. Haval**

(Ph. D., SET, NET & GATE)

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- **PERMANANT ADDRESS**

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- **PERSONAL:**

- |                   |                               |
|-------------------|-------------------------------|
| ➤ Date of Birth:  | 10 <sup>th</sup> October 1977 |
| ➤ Gender:         | Male                          |
| ➤ Marital Status: | Married                       |
| ➤ Nationality:    | Indian                        |

- **Ph. D: June, 2009**

**Title: Synthesis of Natural and Unnatural Dialkyl Substituted Maleic Anhydrides  
and Related Natural Products**

**Research Guide:**

Dr. N. P. Argade

Scientist E-II

Division of Organic Chemistry

National Chemical Laboratory,

Pune 411 008

**Abstract of Thesis:** The present dissertation is divided into three chapters. The first chapter presents a concise account on chemistry of monoalkyl substituted, dialkyl substituted and complex dialkyl substituted maleic anhydrides. In the second chapter, a facile general approach to kinetically controlled isomaleimides followed by a simple and efficient approach to alkyl and dialkyl substituted maleimides have been described via the new contrathermodynamic rearrangement of (*E*)-alkylidenesuccinimides to alkylmaleimides. Also, syntheses of two natural fimbrolides have been reported via the synthesis of requisite butylmaleic anhydride, its regioselective Grignard coupling reaction, and a bromination-dehydrobromination pathway. Third chapter describes a general approach for synthesis of bioactive natural products chaetomelic anhydride A, 2-carboxymethyl-3-hexylmaleic anhydride, 2-( $\beta$ -carboxyethyl)-3-hexylmaleic anhydride, maculalactones A-C, nostoclides I and unnatural dialkyl substituted maleic anhydrides followed by Wittig reaction of maleimide and triphenylphosphine adduct with dihydrofuran/dihydropyran. Finally, our on going study towards the synthesis of natural product byssochlamic acid has been described.

- **ACADEMIC RECORDS:**

- **Ph. D (Organic Chemistry):** National Chemical Laboratory, Pune (University of Pune) awarded in **June 2009**.
- **Master of Science (M. Sc. Chemistry):** Department of Chemistry, Yeshwant College, Nanded (Swami Ramanand Teerth Marathwada University, Nanded). Passed in **June 2002** with **first** in order of merit among the successful candidates (**84.62%**).
- **Bachelor of Science (B. Sc.):** Dayanand Science College, Latur (Swami Ramanand Teerth Marathwada University, Nanded). **June 2000** with **66.93%**.
- **Higher Secondary School Certificate Examination (H.S.C.):** Janta Vidyamandir (Higher Sec. School) Murud. Taluka- Latur, Dist- Latur, Aurangabad Board Passed in **March 1997** with **58.17%**.
- **Secondary School Certificate Examination (S.S.C.):** Terna Sakhar Karkhana Prashala, Terna Nagar. Taluka- Osmanabad, Dist- Osmanabad, Aurangabad Board Passed in **March 1994** with **71.57%**.

- **AWARDS & HONORS:**

- **Chancellor's Gold Medal:** Awarded the *Chancellor's Gold Medal* instituted by *Swami Ramanand Teerth Marathwada University, Nanded* for having secured highest marks amongst all faculty rank holders in March/April **2002**.
- **Gold Medal:** Awarded the *Gold Medal* instituted by *Swami Ramanand Teerth Marathwada University, Nanded* for having secured highest marks in the Master of Science (Chemistry) examination held in March/April **2002**.
- **Qualified National Eligibility Test (NET) (2003):** *Joint CSIR-UGC Junior Research Fellowship (JRF)* and Eligibility for Lectureship-*National Eligibility Test (NET)* held on **22<sup>nd</sup> June, 2003**.
- **Qualified State Eligibility Test (SET) (2003):** *State Eligibility Test*, Maharashtra, Eligibility Test for Lecturership conducted by University of Pune as the State Agency held on **February, 2003**.
- **Qualified Graduate Aptitude Test (GATE) (2003):** *Graduate Aptitude Test in Engineering* conducted by Indian Institute of Technology (IIT) with percentile score **94.93%** and all India rank **147** held on **February, 2003**.
- **Qualified National Eligibility Test (NET) (2002):** *Joint CSIR-UGC Junior Research Fellowship (JRF)* and Eligibility for Lectureship-*National Eligibility Test (NET)* held on **22<sup>nd</sup> December, 2002**.

- **RESEARCH EXPERIENCE:**

- **January 2004 to December 2005**                      **Junior Research Fellow**  
Division of Organic Chemistry,  
National Chemical Laboratory, Pune
- **January 2006 to 2008**                                      **Senior Research Fellow**  
Division of Organic Chemistry,  
National Chemical Laboratory, Pune

- **TEACHING EXPERIENCE:**

- **June 2003 to December 2003**                      **Contributory Lecturer**  
(Postgraduate Level, School of Chemical sciences)  
Swami Ramanand Teerth Marathwada University, Nanded

➤ **September 2009 to till date**

**Lecturer**

(Postgraduate Level, Department of Chemistry)  
Dr. Babasaheb Ambedkar Marathwada University, Subcentre  
Osmanabad-413 501

• **INDUSTRIAL EXPERIENCE:**

➤ **February 2009 to August 2009**

**Associate Scientist**

Generic Division,  
Lupin Pharmaceuticals, Pune

• **RESEARCH PUBLICATIONS:**

1. General strategy for the synthesis of natural and unnatural dialkylmaleic anhydrides  
**Kishan P. Haval** and Narshinha P. Argade *J. Org. Chem.* **2008**, *73*, 6936.

2. Synthesis of natural fimbrolides

**Kishan P. Haval** and Narshinha P. Argade *Synthesis* **2007**, 2198.

3. Cyanuric chloride: Trichloro-1, 3, 5-triazine

**Kishan P. Haval** *Synlett* **2006**, 2156.

4. Haval-Argade contrathermodynamic rearrangement of alkylidenesuccinimide to alkylmaleimides via the corresponding isoimides: a general approach to alkyl and dialkyl substituted maleimides

**Kishan P. Haval** and Narshinha P. Argade *Tetrahedron* **2006**, *62*, 3557.

5. Cyanuric chloride: decent dehydrating agent for an exclusive and efficient synthesis of kinetically controlled isomaleimides

**Kishan P. Haval**, Santosh B. Mhaske and Narshinha P. Argade *Tetrahedron* **2006**, *62*, 937.

• **ORAL PRESENTATIONS:**

1. Haval-Argade Contrathermodynamic Rearrangement of Alkylidenesuccinimides to Alkylmaleimides via the Corresponding Isoimides: A General Approach to Alkyl and Dialkyl Substituted Maleimides. **Haval, K. P.** Argade, N. P. Oral presentation on Science Day (**2006**) at National Chemical Laboratory, Pune.

2. Synthesis of Natural and Unnatural Dialkyl Substituted Maleic Anhydrides and Related Natural Products. **Haval, K. P.**; Argade, N. P. Fourth J-NOST Symposium (2008) at Kamraj Madurai University, Madurai.

- **POSTER PRESENTATIONS:**

- **National:**

1. Synthesis of Natural and Unnatural Dialkyl Substituted Maleic Anhydrides and Related Natural Products. **Haval, K. P.**; Argade, N. P. Poster presented on Science Day (2007) at National Chemical Laboratory, Pune.

- **Symposium/Conference/Seminar/Workshop Attendance**

- **International:**

1. 4<sup>TH</sup> INSA-KOSEF Symposium in Organic Chemistry (2009) at National Chemical Laboratory, Pune.

- **National:**

1. Second J-NOST Symposium (2006) at International College for Girls, Jaipur.
2. Fourth J-NOST Symposium (2008) at Kamraj Madurai University, Madurai.

- **PROFESSIONAL COMPETENCE:**

- ***Synthetic Organic Chemistry:*** Extensive experience in multi-step stereoselective synthesis of organic compounds using novel material and methods, product identification and purification methods like TLC, flash chromatography, GC and HPLC. Product characterization using various spectroscopic techniques such as IR, NMR, Mass-LCMS, Element analyzer and stereochemical assignment by X-ray technique. Knowledge of various organic reactions and the ability to design synthetic routes.

- Technical Knowledge of operation of equipments such as UV spectrophotometer (Hitachi- 330), IR Spectrophotometer (Shimadzu), Polarimeter (Jasco DPI-181).

- Well versed with windows based computer programs such as Chemwindows, Chemdraw, ISIS drawing *etc.*

- Possess good communication skill and capable of collaborative research.

- **RESEARCH INTEREST:**

- Total synthesis of biologically active natural products involving asymmetric synthesis.
- Developing methodologies for important organic transformations in natural products synthesis.

- **OTHER ACTIVITIES:**

- **Student Council Member (2000-2001):** Member of Student Council, Yeshwant Mahavidyalaya, Nanded.
- **NSS Scheme:** Participated in National Service Scheme during **1997-2000** and completed three years service satisfactorily and also participated in the two N. S. S. Camps during 1998-1999 and 1999-2000.
- Qualified Certificate Course in **COMPUTR OPERATIONS** conducted by MAHARASHTRA STATE BOARD OF VOCATIONAL EXAMINATION, MUMBAI during **1998-1999**.
- Qualified examination for Hindi language '**RASHTRABHASHA PRAVIN**' conducted by MAHARASHTRA RASHTRABHASHA SABHA, PUNE in **1992**.

- **REFERENCES:**

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