

# CURRICULUM VITAE

## Khaja Mohammad

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## Career Objective:

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Seeking a Senior Research Associate position in synthetic organic chemistry where I can apply my expertise in organic synthesis, characterization using analytical techniques to contribute research & development in Pharmaceutical industries

## Academic qualification:

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**M.Sc. organic chemistry** CGPA: 6.19/10 (2004-2006),

Department of Chemistry, **Vellore Institute of Technology**-Vellore, India.

Dissertation: **Synthesis and characterization of Famotidine impurities.**

**B.Sc.** Bio-Chemistry, Zoology, and Chemistry. 64.6%

(2000-2003), Kakatiya University, India. Bio-Chemistry, Zoology, and Chemistry. 64.6%

## Skills:

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**Analytical Techniques** NMR, HPLC, GC-MS, Single Crystal XRD, IR spectroscopy

**Synthesis Techniques** Column chromatography, high vacuum distillation, autoclave operation

**Named reactions** Appel reaction, Dauben-michno rearrangement, Reformatsky reaction & strecker aminoacid synthesis

**Reagents Handled** RMgX, n-Buli, Raney Ni, Pd/C, Borane THF, LiAlH<sub>4</sub>, PCC, H<sub>2</sub>O<sub>2</sub>, SOCl<sub>2</sub>, POCl<sub>3</sub>, POBr<sub>3</sub>, CBr<sub>4</sub> and more

**Reactions** Cyclization, Oxidation, Reductions, Halogenations, Esterification, Methylation, Protection-De protection, Cyanation

**Software** ChemDraw, Scifinder

## Work experience:

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Principal Project Associate (March 2016 - June 2024), **University of Hyderabad (ACRHEM)**, Hyderabad, India

- Conducted an **optimization study** for DNPP (3,6-dinitro-1,4-dihydropyrazolo[4,3-c]pyrazole), improving the yield and purity of the compound by optimizing **reaction conditions**
- Implementation **process optimization** techniques, resulting in a 15 % **increase in efficacy** during synthesis

- Led a team of three chemists in synthesizing and optimizing high purity target compounds for R&D ensuring timely project completion and effective collaboration
- Characterized compounds using techniques such as **NMR,HRMS(LC-MS),single crystal XRD GC-MS, TG-DTA&DSC**
- Published research on novel energetic materials, contributing to advancements in the field

Sr. Chemist (September 2015 - Feb 2016), **Denisco Chemicals Pvt. Ltd**, Hyderabad, India

- Conducted gram-scale reactions with a focus on purity and compound characterization.
- Developed scalable synthetic methods for pharmaceutical applications.

Executive Chemist, (January 2014 to Nov 2014.), **Shree Jaya Labs**, Hyderabad, India

- Developed scalable synthetic methods for pharmaceutical applications.

Executive Chemist (December 2010 - December 2013), **Micro Molecules Pvt. Ltd**, Hyderabad, India

- Synthesized and purified target organic compounds
- Managed impurity profiles and confirmed purity through **GC & HPLC**.

### **Projects handled:**

- Synthesized omeprazole, pantoprazole, citalopram, and losartan potassium with >98% purity.
- Worked on energetic materials such as DNPP (3,6-dinitro-1, 4-dihydropyrazolo [4,3-c] pyrazole) and its derivatives
- Synthesis & Characterization of complex molecules like bis(2, 2, 2-trinitroethyl) amine (BTNA).

### **Publication:**

K. Mohammad, V. Thalitiri, N. Kommu\*, A. A.Vargeese\*, octanitropyrazolopyrazole: a gem-trinitromethyl based green high-density energetic oxidizer Chemcommun.2020, 56, 12945-129

### **Conferences & publications:**

Oral Presentation: "11th International High Energy Materials Conference & Exhibit (HEMCE-2017)," Pune, India.

Poster Presentation: "12th International High Energy Materials Conference & Exhibit (HEMCE-2019)," IIT Chennai, India.

### **Certifications:**

- Bruker Single Crystal XRD
- Organic Chemistry in Biology & Drug Development (Swayam NPTEL)
- Principles of Organic Synthesis (Swayam NPTEL)
- Medicinal Chemistry (Swayam NPTEL)

## **Personal profile**

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Nationality	Indian
Languages known	Telugu, Hindi, English
Marital Status	Married
Corresponding address	S/o Ameer Ali H.No 16-2-227/6 Sardarpatel Nagar, Hydernagar Kukatpally Hyderabad, 500085

## **Reference:**

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Dr. Anuj A. Vargeese,  
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## **Declaration:**

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I hereby declare that above details are true to the best of my knowledge and belief.

Date:

Khaja Mohammad