

# Mural Alphonse Quadros

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## OBJECTIVE

To gain expertise in formulation and analysis of pharmaceutical products and to translate them into clinical settings to treat or alleviate human diseases.

## PUBLICATIONS

- Quadros, Mural, Munira Momin, and Gunjan Verma. "Design strategies and evolving role of biomaterial assisted treatment of osteosarcoma." *Materials Science and Engineering: C* (2021): 111875. <https://doi.org/10.1016/j.msec.2021.111875> (impact factor 5.88)
- Quadros, Mural, Munira Momin, and Gunjan Verma. "Implications of Synthesis Methodology on Physicochemical and Biological Properties of Hydroxyapatite." *Handbook on Synthesis Strategies for Advanced Materials* (2022): 617-658 [https://doi.org/10.1007/978-981-16-1803-1\\_15](https://doi.org/10.1007/978-981-16-1803-1_15)
- Anita Chando, Munira Momin, Mural Quadros, Shaily Lalka (2021). Topical nanocarriers for management of rheumatoid arthritis: A review. *Biomedicine & Pharmacotherapy*, 141 (September 2021), 111880. <https://doi.org/10.1016/j.biopha.2021.111880> (Impact factor: 6.5)
- Gunjan Verma, Mural Quadros, Indira K Priyadarsini, K. I. (2019). Hydroxyapatite Nanostructures: Implications of Surface Passivation on Colloidal Stability and Drug Delivery, *A Publication of the Society for Materials Chemistry, ISSN 2394-5087 10(1)*, 39–45.

## EDUCATION

<b>SVKM's Dr. Bhanuben Nanavati College of Pharmacy, Mumbai University, India</b> Masters in Pharmaceutical Sciences	2018 – 2020
<b>MET Institute of Pharmacy, Mumbai University, India</b> Bachelor of Pharmacy	2014 –2018

## RESEARCH FELLOWSHIP

Fellowship for Master of pharmacy from All India Council for Technical Education (AICTE), India 2018-2020

## RESEARCH HIGHLIGHTS

**Research Trainee** 2020-2021

Dr. Bhanuben Nanavati College of Pharmacy (BNCP), Mumbai University, India

**Project title:** Development of PLGA nanofibers for drug delivery and wound healing applications

**Project advisor:** Dr. Munira Momin, Principal and Professor, BNCP

**Project summary:** The project consists of synthesis and optimization of PLGA nanofibers with respect to size, solvent system and electrospinning parameters. The PLGA nanofibers are evaluated for drug loading and drug release characteristics. Biocompatibility and therapeutic efficacy is determined by cell culture studies

**Research Trainee** 2019 – 2020

Bhabha Atomic Research Center (BARC), India

**Project title:** Development of hydroxyapatite-magnetic nanocomposites as drug delivery carrier for cancer therapy

**Project advisor:** Dr. Munira Momin (BNCP) & Dr. Gunjan Verma, Scientific Officer F (BARC)

**Project summary:** The project includes synthesis of hydroxyapatite- magnetic nanocomposites for delivery of anticancer drug, doxorubicin. The hydroxyapatite shell is functionalized to attain colloidal stabilization and to provide additional sites of drug attachment. The nanoparticles are studied with respect to their size, drug loading efficiency, pH dependent drug release kinetics, cytotoxicity and cell uptake studies in mammalian cancer cell lines.

## LABORATORY SKILLS

- Particle size analysis using photon correlation spectroscopy, 4800 Autosizer-Malvern.
- Drug release studies using high performance liquid chromatography, Agilent 1260 Infinity.
- Fabrication of nanofibers using nanofiber electrospinning instrument, E-spin nanotech super ES-2.
- Zeta potential analysis using zetasizer, Nano Z- Malvern.
- Functional group analysis using FTIR Spectrophotometer, IRAffinity 1S-Shimadzu.
- Drug loading estimation using UV-visible spectrophotometer, V-650- Jasco.
- Drug release and cell culture assays using Microplate reader, Synergy H1- BioTek Instruments
- Cell uptake studies using Florescence microscope, CKX53 inverted microscope-Olympus and confocal microscopy, Olympus.
- Data analysis of X-ray powder diffraction (XRD), Differential scanning calorimetry (DSC), Thermogravimetric analysis (TGA).
- Cytotoxicity studies by MTT assay in cell lines (NIH3T3, RAW 264.7, MCF-7, MG-63, A549).
- Experienced in basic handling of wistar rats.
- Softwares: Origin 8, Mendeley, Biorender, Sketchup, MS publisher, MS office

## INTERNSHIP

### ACG-Associated Capsules

August 2020- January 2021

- Content writer: Created articles about design strategies of capsules and tablets for pharmaceutical use.  
Glumex Pharmaceuticals, Mumbai India. June-July 2017
- Trainee: Gained familiarity in manufacturing (tablets, dry syrups and solutions), quality control and quality assurance departments. Performed quality control tests for tablets to provide reliable data.

## AWARDS AND CERTIFICATION

- Class representative: MET Institute of Pharmacy. 2015-2016
- Editor of "NEST" (annual pharmacy magazine): MET Institute of Pharmacy. 2016-2017

### **Paper and poster presentations:**

- Oral paper presentation (PG/PhD level) at 1<sup>st</sup> student research congress on 'Innovation for better health' organized by Dr. Bhanuben Nanavati College of Pharmacy (BNCP) and co-hosted by university of Mumbai, Mumbai 2020.
- Poster presentation titled 'Circular Dichroism: Principle and Applications', at Rx melange organized by Indian pharmaceutical association, Mumbai 2018. Second runner up.
- Poster presentation titled 'New Advancements in Personalized Medicines at the Right Dose for the Right Patient', at National symposium on 'Scope, Innovations and Methods in Biotechnology', MET institute of pharmacy, Mumbai 2017. First Place Award Recipient.
- Oral paper presentation titled 'FACS- Florescence Activated Cell Sorting' at Rx Voyage organized by Indian pharmaceutical association, Mumbai 2017. First Place Award Recipient.
- Poster presentation titled 'FACS- Florescence Activated Cell Sorting' at National symposium on 'Statistical Methods in Research and Business Analytics: A Pharmaceutical Perspective', at St. John institute of pharmacy, Mumbai 2017. First Place Award Recipient.
- Poster presentation titled 'Applications of Pharmacokinetics' at seminar 'Biopharmaceutics and Pharmacokinetics: Bench to Bedside', MET institute of pharmacy, Mumbai 2016. First Place Award Recipient.

## REFEREES

- Dr. Gunjan Verma- [gunjanv@barc.gov.in](mailto:gunjanv@barc.gov.in)  
Scientific Officer F, Chemistry Division, Bhabha Atomic Research Centre (BARC), Mumbai.
- Dr. Munira Momin- [Munira.Momin@bncp.ac.in](mailto:Munira.Momin@bncp.ac.in)  
Principal and Professor, Dr. Bhanuben Nanavati College of Pharmacy (BNCP), Mumbai.