



DR. NIYATI MUDLIAR (PhD)

**Ph.D. (Biophysics) | IIM Kozhikode's Data Science Program | MBA in Healthcare |
Project Management | Product Management | Bio-Analytical Techniques |
Clinical Research | Biotechnology Research | Ed-Tech | Teaching | Academia |
Patents | Grants | Publications | Market Research | Data Science**

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Also available on : Google Scholar , Research Gate , LinkedIn

Professional Summary

- Accomplished Scientific Officer and Assistant Professor with over 6 years of experience in leading research projects, teaching, and laboratory management. Clinical Research and Pharmacovigilance trainer for the students of PG Diploma Course in Clinical Research.
- GCP trained Member Secretary of Independent Ethics Committee (IEC) for reviewing Clinical Trial, SOP formulation, training, audits & DCGI Compliance. Recognized by ISCR & U.S. Health and Welfare Department. Experience of 5 years till 2023.
- Successfully secured government and institutional grants, including a notable project on Unani medicine for PCOS management and on development of diagnostic probe for Alzheimer's disease with a budget of INR 38.4 Lakhs and INR 31.5 Lakhs respectively.
- Published 13 international research papers with a cumulative impact factor of 75 and one patent granted for development of a near infra-red fluorescence sensor.
- Organized and facilitated workshops and hands-on training sessions on advanced bio-analytical techniques, enhancing practical knowledge and skills of students and professionals.
- Currently working as Business Development Manager & Academic Strategist in the founder's office of an Ed-Tech company and school administration under the same management. Developing research based learning products for enhancing academic performance.
- Completed Data Science in Business Decisions from IIM Kozhikode and an MBA in AI-Healthcare from D. Y. Patil University, Pune, to integrate advanced data analytics and management skills into scientific research.

Skills

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| • Research Project Management | • Product Development & Product Management |
| • Team Leadership and Supervision | • Clinical Trials, BA/BE studies review & approval |
| • Bio-analytical Techniques | • SOP formulation, Audits & Compliance |
| • Grant Writing and Proposal Development | • Workshop and Training Facilitation |
| • Excellent Communication skills | • Community Outreach and Social Welfare |
| | • Laboratory Operations and Safety Compliance |

Technical Skills

Computational Skills for Data Science & AI-ML:

- Pymol, R, Python, NumPy, Pandas, Tensorflow, Tableau, PowerBI, NodeXL, Microsoft Office.
- Descriptive Analytics, Predictive Analytics, Prescriptive Analytics, Social Media Analytics, Natural language processing (NLP), Big Data Analytics, AI-ML.
- Regression and Classification, Clustering, CART, Ensemble Techniques, Text mining, Time series forecasting, Artificial Neural Network (ANN) and many more.

Laboratory Skills:

- UV/Vis Absorption & Fluorescence Spectroscopy, Time-resolved Spectroscopy, FTIR, AFM
- Circular Dichroism Spectroscopy, Fluorescence Depolarization Measurement
- X-ray Diffraction, SEM, TEM, Dynamic Light Scattering, HPLC, Affinity Chromatography
- Molecular Biology tests - PCR, ELISA, Western and Southern Blotting
- Microbiological Tests, Cell Culture Techniques, Stem Cell Isolation
- Animal Handling, Alzheimer's Disease Induction in Rats & Treatment

Work History

BUSINESS DEVELOPMENT MANAGER & ACADEMIC STRATEGIST, 12/2023 - current (Founder's Office –Mark Education Pvt. Ltd & GS Shetty International School)

- Curriculum development: k-10 – PCMB subjects
- Educational research and trends: identifying the potential market & product market fit analysis using Data Science tools
- Leadership & people management: coordination with subject experts, animators, editors, sales & marketing and subordinates for assuring deliverables on time
- Product development and product management: learning resources & Ed-Tech products
- Stakeholder engagement: internal & external both, school clients
- Quality assurance: ensuring the accuracy, relevance, compliance and effectiveness of all academic content.
- Digital Marketing – Google Adverts, Instagram & Facebook, GMB profile management

SCIENTIFIC OFFICER & ASST. PROFESSOR, 10/2021 – 10/2023 **SVKM's Shri C. B. Patel Research Centre**

- Principal Investigator for a project on pharmaceutical products for PCOS management.
- Co-Principal Investigator for research on fluorescent sensors for Alzheimer's detection.
- Guided M.Sc. and undergraduate students in research projects and thesis work.
- Conducted social welfare activities such as blood donation and thalassemia awareness camps.
- Secured government and institutional grants worth INR 69.9 Lakhs.
- Granted one patent on a near-infrared fluorescence sensor.

RESEARCH EXECUTIVE & COURSE COORDINATOR, 11/2018 - 09/2021 **SVKM's Shri. C. B. Patel Research Centre**

- Course Coordinator for academic and certificate courses, managing lectures, exams, and results.
- Member Secretary of the Independent Ethics Committee, overseeing clinical trials and SOP formulation, auditing the trial site and regulatory compliance (11/2018 - 10/2023).
- Organized and demonstrated hands-on training in bio-analytical and cell culture techniques.

RESEARCH ASSISTANT, 08/2017 - 11/2018 **SVKM's Shri. C. B. Patel Research Centre**

- Lab work on various lab instruments, data collection and analysis.

Teaching Experience

- Assistant Professor & Course Coordinator
SVKM's Shri. C. B. Patel Research Centre for Chemistry and Biological Sciences, Mumbai, India
Oct 2021 – Oct 2023
- Science Teacher & Research Expert
G. S. Shetty International School, Mumbai, India
Nov 2023 – Jun 2024
- Visiting Faculty
SVKM's Dr. Bhanuben Nanavati College of Pharmacy, Mumbai, India
Aug 2023 – Dec 2023
- Teaching Aid
Biophysics Department, University of Mumbai, India
Jun 2021 – Sep 2021
- Visiting Faculty
Sunandan Divatia School of Science, NMIMS University, Mumbai, India
Jan 2018 – Apr 2020

- Biology Lecturer
Zeal Academy, Mumbai, India
Apr 2017 – Nov 2018
- Physics Teacher
Mahesh Tutorials, MT Educare, Mumbai, India
Apr 2017 – Mar 2018

Education

Program of Data Science For Business Decisions

IIM Kozhikode - 2024

Ph.D. : Biophysics

University of Mumbai - Kalina Campus - 2023

Thesis Title: Photophysical Investigation of Molecular Probes for Heparin and Heparin Binding Proteins: Towards Their Efficient Detection

Master of Science: Biological Sciences

NMIMS University - SD SOS - 2016

Bachelor of Science: Biotechnology

University of Mumbai - Jai Hind College - 2014

Patent

Near Infra-Red (NIR) Fluorescence Sensor for Selective Detection of Pathogenic Protein Agglomerates

Patent No. 429093, Grant Date: 17/04/2023

Inventors: Niyati H. Mudliar, Oshin Warerker, Munira Momin

Publications

1. OD Warerker, Niyati H Mudliar, et al., *Int J Biol Macromol*, 2023. "A highly sensitive hemicyanine-based near-infrared fluorescence sensor for detecting toxic amyloid aggregates in human serum."
2. OD Warerker, Niyati H Mudliar, et al., *Crit Rev Ther Drug Carrier Syst*, 2023. "Targeting Amyloids with coated Nanoparticles: A review on lucrative combinations of Nanoparticles and its Bio-compatible coating."
3. OD Warerker, Niyati H Mudliar, et al., *J Mol Liq*, 2021. "A hemicyanine based fluorescence turn-on sensor for amyloid fibril detection in the far red region."
4. Niyati H Mudliar, PM Dongre, et al., *Int J Biol Macromol*, 2021. "A Heparin based dual ratiometric sensor for Thrombin."
5. Niyati H Mudliar, AM Pettiwalla, et al., *Int J Biol Macromol*, 2020. "An anionic polyelectrolyte induced aggregate assembly of Thioflavin-T: A prospective platform for Protamine sensing."
6. Niyati H Mudliar, PM Dongre, et al., *Dyes Pigm*, 2020. "A molecular rotor based dual ratiometric sensor for heparinase."
7. Niyati H Mudliar, PM Dongre, et al., *Sens Actuators B Chem*, 2019. "An efficient J-aggregate based fluorescence turn-on and ratiometric sensor for heparin."
8. AM Pettiwalla, Niyati H Mudliar, et al., *Proc Indian Natn Sci Acad*, 2019. "Thioflavin-T: A Versatile Optical Probe for Chemo and Biosensing."
9. Niyati H Mudliar, PK Singh, *Chem Commun*, 2019. "A molecular rotor-based turn-on sensor probe for amyloid fibrils in the extreme near-infrared region."
10. Niyati H Mudliar, AM Pettiwalla, et al., *J Phys Chem B*, 2016. "On the molecular form of amyloid marker, Auramine O, in human insulin fibrils."
11. Niyati H Mudliar, PK Singh, *ACS Appl Mater Interfaces*, 2016. "Emissive H-aggregates of an ultrafast molecular rotor: a promising platform for sensing heparin."
12. Niyati H Mudliar, B Sadhu, et al., *J Phys Chem B*, 2016. "Evaluation of an ultrafast molecular rotor, auramine O, as a fluorescent amyloid marker."

13. Niyati H Mudliar, PK Singh, *Chem Eur J*, 2016. "**Fluorescent H-Aggregates Hosted by a Charged Cyclodextrin Cavity.**"
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Honors & Awards

- **InSc Young Achiever Award** -Indian Institute of Science, Bangalore, 2020
 - **Recognized Reviewer** -InSc - International Journal of Basic and Applied Sciences, 2020
 - **Best Poster Presentation Award** -National Symposium on Facets of Life Sciences (NSFLS-2019), University of Mumbai, 2019
14th DAE-BRNS Biennial Trombay Symposium on Radiation and Photochemistry (TSRP-2018), BARC, 2018
 - **Graduate Aptitude Test in Engineering (GATE-2017)** -All India Rank: 351, Life Sciences
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Training

- **Good Clinical Practice (GCP) Training**
NIDA Clinical Trials Network, Global, June 2023
 - **Faculty Development Program (FDP)**
IIDE on Online Teaching & E-Content, June 2020
 - **FDA Certification on Enforcement Responsibilities (Abridged)**
April 2020
 - **GCP Training**
SVKM's Shri. C. B. Patel Research Centre, Mumbai, July 2019
 - **GCP Training**
H. B. T. Medical College (Cooper Hospital), Juhu, Mumbai, January 2019
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References

- Dr. Prabhakar M. Dongre (Prof.), Head, Department of Biophysics, University of Mumbai, Santacruz (E), Kalina, Mumbai, India, 400 098, drpmdongre@yahoo.co.in, +91 83698 31994
- Dr. Mhejabeen Sayed (Scientist), Radiation & Photochemistry Division, Bhabha Atomic Research Centre, Mumbai, Mumbai, India, 400 085, msayed@barc.gov.in, +91 226929 0296/+91 9969435244