

## DR NIDHI PURI

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Citizenship: Indian (Hindu Khatri)  
Date of Birth: 21<sup>st</sup> April 1986  
Res. Address: C-189, Kendriya Vihar, Sector-51, NOIDA,  
Uttar Pradesh-201301, India.  
Teaching Exp.: Eleven (11) years



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## CAREER OBJECTIVES

I wish to pursue my career in an interdisciplinary research in an organization which offers me an opportunity for practical application of theoretical knowledge while at the same time giving me the chance to study policy and decision making process in the concerned area. Specific interest is in teaching and working towards developing new marketable products. Self motivated with excellent communication skills and team management prowess.

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## EDUCATION

Doctor of Philosophy (Ph.D.) Physics

Department of Physics, **Jamia Millia Islamia, Delhi**

Graduation (Period): Jan 2015 (Dec 2010 - Jan 2015)

Thesis: Dynamic studies on thin film based sensors for biomedical applications

Work Place: **CSIR-National Physical Laboratory, New Delhi.**

Thesis Supervisor: Dr. Asad Niazi, Jamia Millia Islamia, Delhi

Dr. Rajesh, National Physical Laboratory, New Delhi

M.Tech, Engineering Physics

Department of Physics, University School of Basic & Applied Sciences,

**G.G.S. Indraprastha University, Delhi**

Graduation (Period): 2010 (2008-2010)

Thesis: Interdigitated Micro Electrode based Uric Acid Biosensor

Thesis Supervisor: Dr. Rajesh, Pr. Scientist, NPL, New Delhi

Score: **84.12% marks, 1st rank in merit**

M.Sc. Physics

Department of Physics, **University of Rajasthan, Jaipur**

Graduation (Period): 2008 (2006-2008)

Specialization: High Energy Physics (Particle Physics)

Score: **88.41% marks, 1st rank in merit**

B.Sc, Non medical Sciences

University of Rajasthan, Jaipur

Graduation (Period): 2006 (2003-2006)

Score: **90.96% marks, 1st rank in merit**

12<sup>th</sup> Standard

Board of Secondary Education, Ajmer, Rajasthan

Graduation (Period): 2003

Score: **84.00% marks**

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## RESEARCH EXPERIENCE

CSIR-JRF-SRF, CSIR-NPL, New Delhi, August 2010-August 2014

### **Dynamic studies on thin film based sensors for biomedical applications**

Prepared various thin film based macro and micro sensors and then characterized them using various electrochemical techniques and metrological techniques. Then the sensing was done using electrochemical techniques against the cardiac Myoglobin (cMb).

Six month training, CSIR-NPL, New Delhi, Jan-July 2010

### **Interdigitated Micro Electrode based Uric Acid Biosensor**

Prepared a uric acid biosensor using interdigitated microarray electrode, where response was measured using amperometry, the improved sensitivity and shelf life with small volumes of samples and reagents in lesser analysis time are the advantages of this biosensor.

Two months training, CSIR-NPL, New Delhi, June-July 2009

### **Technical Development of Electrochemical Impedance Biosensor for Biomedical Applications**

Prepared an immunosensor for the detection of C-reactive protein (CRP) using Impedimetry, protein was immobilized by utilizing covalent immobilization, and sensing results showed good linearity and sensitivity of immunosensor.

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## SKILLS & PROFICIENCIES

Natural Languages: English, Hindi, Punjabi (Beginner)

Programming Languages: Fortran 77, C, C++, Microprocessor (Beginner)

Mathematical & Graphical Software: MATLAB, GAMES

Operating System: Linux/Unix, Windows

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## RESEARCH INTERESTS

Nanotechnology and Nanomaterials  
Field effect transistors based biosensors  
Exotic Carbon based materials and supercapacitors  
Material Science & Applications  
Wastewater remediation techniques

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## TEACHING EXPERIENCE

Associate Professor, IILM University, Greater NOIDA, June 2023-Present

### **Teaching experience at University, Greater NOIDA**

Teaching different subjects like Engineering Physics, Semiconductor Physics, Physics, Fundamentals of Physics to B.Tech. students

Assistant Professor, Lloyd Institute of Engineering and Technology (LIET), Greater NOIDA, Nov 2021-May 2023

### **Teaching experience at Engineering College, Greater NOIDA**

Teaching Engineering Physics to B.Tech. students

Teaching Applied Physics to Diploma students

Teaching Universal human Values to B.Tech./B.Pharma/Diploma students

Assistant Professor, I.T.S Engineering College, Greater NOIDA, July 2015-Nov 2021

### **Teaching experience at Engineering College, Greater NOIDA**

Teaching Engineering Physics to B.Tech. students

Visiting Lecturer, AIAS, Amity University, NOIDA, Sept. 2014 to June 2015

### **Teaching experience at Amity School of Engineering, Amity University, NOIDA**

Teaching Applied Physics to B.Tech. students

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## ADMINISTRATIVE EXPERIENCE

- **Head / Coordinator Department of Physics**, School of Basic & Applied Sciences, IILM University, Greater Noida
- **Convener IIC**, LIET, Gr Noida
- **Coordinator NISP** LIET, Gr Noida
- **Coordinator EDC** LIET, Gr Noida
- **Coordinator Research Committee** LIET, Gr Noida
- **Coordinated** student 10<sup>th</sup> International Conference on Recent Challenges in

Engineering and Technology, Bali , Indonesia (ICRCET-22) from 22-23 June 2022; Hybrid Conference. Organized by- Institute For Engineering Research and Publication (IFERP). Co-Host by Udayana University, Universitas Mercu Buana and Lloyd Institute of Engineering & Technology.

- **Chaired a session** in ICRCET-22, Hybrid Conference from 22-23 June 2022.
- **Co-Coordinator NewGen IEDC** I.T.S Engineering College, Gr Noida. (July 2020-Nov 2021)
- **ARIIA Coordinator** at ITSEC Gr. Noida. (Oct 2018-Nov 2021)
- **Convener** of Literary Committee in I.T.S Engineering College, Greater Noida. (Oct 2016-Nov 2021)
- **Coordinated** student innovative project **Flywheel Energy Storage System** for POC development, under NewGen IEDC, DST, Govt. of India Funding. (Oct 2020-Nov 2021)
- **Coordinated** twenty five days (15 Feb 2021-12 Mar 2021) Women Entrepreneurship Development Program (WEDP), fully sponsored by Department of Science & Technology (DST-NIMAT), Govt. of India, at ITSEC, Gr. Noida
- **Coordinated** three days (2<sup>nd</sup>-4<sup>th</sup> July 2020) Webinar Series on Physics, Chemistry and Mathematics at I.T.S Engg College, Gr. Noida
- **Coordinated** FDP in Entrepreneurship Development Program (10-21 Dec 2018), Sponsored by DST-NIMAT Project, Govt. of India at ITSEC, Gr. Noida
- **Jury Member** in 26<sup>th</sup> State Level National Children's Science Congress 2018
- **Member** in UPSEE-2016 Document Verification team
- **Member** in B.Tech. Orientation Program Committee
- B.Tech. Class Mentor

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## HONORS AND AWARDS

Outstanding Association Award at I.T.S Engineering College, Gr. Noida. (31 Dec 2020)

National Eligibility Test (**NET**), **CSIR-JRF**, 2008

Graduate Aptitude Test in Engineering (**GATE**), 2008

**Gold Medal** from G.G.S.I.P. University, Delhi for 1<sup>st</sup> rank in merit in M.Tech, 2010

Joint Entrance Screening Test (**JEST**) 2008

**Gold Medal** from University of Rajasthan for 1<sup>st</sup> rank in merit in M.Sc, 2008

Joint Admission test (**JAM**) conducted by Indian Institute of Technology, 2006

**Gold Medal** from University of Rajasthan for 1<sup>st</sup> rank in merit in B.Sc, 2006

**Bhamashah Award** from Maharana Mewar Foundation, B.Sc, 2006

Post graduate merit Scholarship, B.Sc, 2006

**Gargee Prize** award and National Scholarship award, 10<sup>th</sup>, 2001

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## **OTHER CERTIFICATES & COURSES**

- Online course “Classical Electromagnetism - 1 (Electrostatics)”; Designed by Prof H.C. Verma; Organized by Centre for Development of Technical Education (CDTE), Indian Institute of Technology Kanpur. Certificate earned on Dec 15, 2020
  - Online course “Advanced Course on Special Theory of Relativity”; Designed by Prof H.C. Verma; Organized by Centre for Development of Technical Education (CDTE), Indian Institute of Technology Kanpur. Certificate earned on May 19, 2020
  - MOOC’s on Quantum Optics 1: Single Photons; by Ecole polytechnique, University Paris Saclay on Coursera. Certificate earned on April 24, 2020
  - MOOC’s on Advanced Physics; by Alison. Certificate earned on Nov, 2018
  - MOOC’s on Advanced Motion in Two Dimensions; by Alison. Certificate earned on May, 2018
  - MOOC’s on Introduction to Motion in 2 Dimensions; by Alison. Certificate earned on Mar,2018
  - MOOC’s on Basic Physics; by Open 2 Study. Certificate earned on June, 2018
  - MOOC’s on Motion, Speed and Time; by Alison. Certificate earned on Jan 4, 2018
  - Online course “Physics of Semiconductors”; Designed by Prof H.C. Verma; Organized by Centre for Development of Technical Education (CDTE), Indian Institute of Technology Kanpur. Certificate earned on November 24, 2017
  - MOOC’s on Advanced Physics 1; by Alison. Certificate earned on May, 2017
  - MOOC’s on Understanding Research Methods; by University of London & SOAS University of London on Coursera. Certificate earned on October 18, 2016
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## **FDP PROGRAM ATTENDED**

- FDP Program attended from 9-16 June 2025, on “Data Analytics using AI”, Organized by E&ICT Academy, IIT Kanpur, India.
  - FDP Program attended from 27-31 Jan 2025, on “Outcome Based Education and Accreditation”, Organized by GNIOT, Greater Noida, India.
  - FDP Program attended from 12-16 Sept 2023, on “Advances in Sustainable Materials” Organized by: Division of Chemistry, School of Basic Sciences, Galgotias University, Greater Noida, India.
  - FDP Program attended from 17-21 July 2023, on “Teaching Learning & Evaluation” Organized by: School of Engineering Sciences, IILM University, Greater Noida, India.
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- FDP Program attended from 15-19 Feb 2021, on “Universal Human Values Refresher 1 (Part-1)” Organized by: All India Council for Technical Education (AICTE), India.
- FDP Program attended from 23-27 July 2020, on “Inculcating Universal Human Values in Technical Education” Organized by: All India Council for Technical Education (AICTE), India.
- FDP Program attended from 25-29 May 2020, on Juggling in the midst of the New Normal Organized by: H & S Team, Department of Humanities & Social Sciences, KIET Group of Institutions, Ghaziabad India.
- FDP Program attended from 10-21 Dec 2018, on Entrepreneurship Development Organized by: Entrepreneurship Development Cell, I.T.S Engineering College, Greater Noida (NAAC Accredited Campus); Sponsored by DST-NIMAT Project, Govt. of India.
- FDP Program attended from 09-13 Jan 2017, on Developments and Challenges in Materials & Manufacturing Processes; Organized by: Department of Mechanical Engineering, I.T.S Engineering College, Greater Noida (NAAC Accredited Campus)

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## BOOK CHAPTERS

1. Sharma, S., **Nidhi Puri**, Dhingra, P., & Quraishi, M. A. (2021). Biosurfactants: Introduction, Types, and Industrial Applications. In Surfactants from Renewable Raw Materials (pp. 133-146). CRC Press.  
[Biosurfactants | 7 | Introduction, Types, and Industrial Applications \(taylorfrancis.com\)](#)
2. **Nidhi Puri**, Dhingra, N., & Bhushan, I. (2022). 9 Water and Soil Remediation. Polymeric Biomaterials: Fabrication, Properties and Applications, 109.  
[Polymeric Biomaterials: Fabrication, Properties and Applications - Google Books](#)
3. Sharma, N., Choudhary, B., & **Nidhi Puri**. Nanoherbicides: Formulations and Applications. In Nanopesticides, Nanoherbicides, and Nanofertilizers (pp. 83-93). CRC Press (2023).  
[Nanoherbicides | 5 | Formulations and Applications | Neha Sharma, Bhar \(taylorfrancis.com\)](#)
4. **Nidhi Puri**. Chapter 2: Novel Approaches for the Synthesis of Nanomaterials for Nanodevices in Medical Diagnostics. In Applications of Nanoparticles in Drug Delivery and Therapeutics. Bentham Science Publishers (2024).  
<https://doi.org/10.2174/9789815256505124010005>

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## PUBLICATIONS IN SCI JOURNALS

1. **Nidhi Puri** & Gupta, A. (2025). A review on design and mechanism approaches of metal-organic framework composites for supercapacitance performance. Coordination Chemistry Reviews, 540, 216772. <https://doi.org/10.1016/j.ccr.2025.216772> (Elsevier 23.5)
2. Chaudhary, S., **Nidhi Puri**, & Gupta, A. (2025). Kitchen waste-derived graphene and carbon dots in metal oxide nanocomposites for supercapacitor applications. Journal of

- Materials Science: Materials in Electronics, 36(19), 1-15. <https://doi.org/10.1007/s10854-025-15246-4> (Springer 2.8)
3. Gupta A. & **Nidhi Puri**. (2024). Recent advances in hydrogen production using metal organic frameworks and their composites. International Journal of Hydrogen Energy, 78, 303-324. <https://doi.org/10.1016/j.ijhydene.2024.06.126> (Elsevier 8.3)
  4. Alshammari, A.S., **Nidhi Puri** & Chaudhary, S. (2023). Graphene oxide/polyaniline nanocomposite as an electrode material for supercapacitor applications. Journal of Materials Science: Materials in Electronics, 34(27), 1861. <https://doi.org/10.1007/s10854-023-11244-6> (Springer 2.8)
  5. **Nidhi Puri** and Gupta A. (2023). Water remediation using titanium and zinc oxide nanomaterials through disinfection and photo catalysis process: A review. Environmental Research, 227, 115786. <https://doi.org/10.1016/j.envres.2023.115786> (Elsevier 8.431)
  6. **Nidhi Puri**, Gupta A., and Mishra A. (2021). Recent advances on nano-adsorbents and nanomembranes for the remediation of water. Journal of Cleaner Production, 322, 129051. <https://doi.org/10.1016/j.jclepro.2021.129051> (Elsevier 11.072)
  7. Rajesh, Gao, Z., Charlie Johnson, A. T., **Nidhi Puri**, Mulchandani, A., & Aswal, D. K. (2021). Scalable chemical vapor deposited graphene field-effect transistors for bio/chemical assay. Applied Physics Reviews, 8(1). <https://doi.org/10.1063/5.0024508> (AIP 19.527)
  8. Mishra, S.K. & **Nidhi Puri**. (2020). An ab initio study of electronic Structure and properties of guanosine. ITSEC International Journal of Engineering Sciences, 1, 20-23.
  9. Gupta, A., Mishra, A. & **Nidhi Puri**. (2017). Peptide nucleic acids: Advanced tools for biomedical applications. Journal of biotechnology, 259, 148-159. <https://doi.org/10.1016/j.jbiotec.2017.07.026> (Elsevier 5.726)
  10. **Nidhi Puri**, Mishra, S. K., Niazi, A., Srivastava, A. K., & Rajesh. (2015). Physicochemical characteristics of reduced graphene oxide based Pt-nanoparticles-conducting polymer nanocomposite film for immunosensor applications. Journal of Chemical Technology & Biotechnology, 90(9), 1699-1706. <https://doi.org/10.1002/jctb.4480> (Wiley 3.709)
  11. **Nidhi Puri**, Niazi, A., Biradar, A. M., Mulchandani, A., & Rajesh. (2014). Conducting polymer functionalized single-walled carbon nanotube based chemiresistive biosensor for the detection of human cardiac myoglobin. Applied Physics Letters, 105(15). <https://doi.org/10.1063/1.4897972> (AIP 3.971)
  12. **Nidhi Puri**, Niazi, A., & Srivastava, A. K. (2014). Biointerfacial impedance characterization of reduced graphene oxide supported carboxyl pendant conducting copolymer based electrode. Electrochimica Acta, 123, 211-218. <https://doi.org/10.1016/j.electacta.2013.12.188> (Elsevier 7.336)
  13. **Nidhi Puri**, Mishra, S. K., Niazi, A., & Biradar, A. M. (2013). Structural and impedance spectroscopic studies on biofunctionalized poly (pyrrole-co-pyrrolepropyic acid) film. Synthetic metals, 169, 18-24. <https://doi.org/10.1016/j.synthmet.2013.02.016> (Elsevier 4.0)

14. **Nidhi Puri**, Niazi, A., Srivastava, A. K., & Rajesh. (2014). Synthesis and characterization of reduced graphene oxide supported gold nanoparticles-poly (pyrrole-co-pyrrolepropylic acid) nanocomposite-based electrochemical biosensor. *Applied biochemistry and biotechnology*, 174, 911-925. <https://doi.org/10.1007/s12010-014-0997-9> (**Springer 3.094**)
15. Rajesh, **Nidhi Puri**, Mishra, S. K., Laskar, M. J., & Srivastava, A. K. (2014). Microstructural and Potential Dependence Studies of Urease-Immobilized Gold Nanoparticles–Polypyrrole Composite Film for Urea Detection. *Applied biochemistry and biotechnology*, 172, 1055-1069. <https://doi.org/10.1007/s12010-013-0564-9> (**Springer 3.094**)
16. **Nidhi Puri**, Sharma, V., Tanwar, V. K., Singh, N., Biradar, A. M., & Rajesh. (2013). Enzyme-modified indium tin oxide microelectrode array-based electrochemical uric acid biosensor. *Progress in Biomaterials*, 2, 1-7. <https://doi.org/10.1186/2194-0517-2-5>  
(**Springer 4.878**)
17. **Nidhi Puri**, Tanwar, V. K., Sharma, V., Ahuja, T., & Biradar, A. M. (2010). Rajesh, Electrochemical characterization of surface modified gold electrode for the detection of C-reactive protein. *Int. J. Integr. Biol*, 9, 1-5. <http://ijib.classicus.com/IJIB/Arch/2010/2201.pdf>

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## CONFERENCE PRESENTATIONS WORKSHOPS & POSTERS

1. Delivered an invited talk in “International e-Conference on Multifaceted Applications in Biotechnology and Applied Sciences (e-COMBAS 1.0)” in online mode during 25 – 27 July, 2024 and received **Best Talk award** under Faculty category.
2. Attended two days workshop INUP - i2i, “14<sup>th</sup> User Awareness Workshop on Fabrication & Characterization Facility for Nanotechnology”, held at IIT Delhi during 29 – 30 April, 2024.
3. Attended five-days Faculty Development Programme on “Advances In Sustainable Materials” organized by the School of Basic Sciences, Galgotias University, Greater Noida from 12-09-2023 to 16-09-2023.
4. Attended International Webinar on “Physics of Nanomaterials: Synthesis and Characterization with Practical Examples”, 23<sup>rd</sup> June 2020 organized by Department of Applied Sciences, KIET Group of Institutions, Ghaziabad India.
5. Attended Online Webinar on “Imagined Speech: An upcoming development in Brain Computer Interface (BCI)”, 28<sup>th</sup> May 2020 organized by Department of Electronics & Communication Engineering, I.T.S Engg. College, Gr. Noida; Lecture delivered by Dr. Yash Vardhan Varshney (IIT, Bombay).
6. Attended Online Webinar on “COVID-19: Challenges for scientists in diagnosis and vaccine development”, 2<sup>nd</sup> May 2020 by Mr. Vinod Purohit, Director and Principal Consultant, Global Regulatory strategy Lead, London, UK.
7. Attended Online Workshop on “How to improve article acceptance rate and publish quicker”, 1<sup>st</sup> May 2020 organized by Emerald Publishing.
8. Attended National Conference on “Emerging Green Technology and Technical Terminology”, 13-14<sup>th</sup> Feb 2019 in Ramjas College, DU, sponsored by CSTT, MHRD, Govt. of India.
9. Attended an IEEE International Seminar on “Smart Technologies for Smart City”, 19-20 April 2018 in Greater Noida.

10. Attended a National Conference on Emerging Trends in Applied Sciences NCETAS-2016 with an Oral Talk on “Field Effect Transistor Biosensor for Cardiac Biomarkers”, 23-24 Sep 2016 in Greater Noida.
11. Attended an international conference APA-2014 with a poster presentation “Physicochemical characteristics of reduced graphene oxide based poly(pyrrole-co-pyrrolepropylyc acid) film based bioelectrode” in International Conference on Polymers: Vision & Innovations, Asian Polymer Association-2014, 19-21 Feb 2014 in New Delhi.
12. Attended Indian-Japan Workshop on Biomolecular Electronics & Organic Nanotechnology for Environment Preservation IJWBME-2013 with a poster presentation “Gold nanoparticles decorated reduced graphene oxide based poly(pyrrole-co-pyrrolepropylyc acid) nanocomposite for electrochemical sensing”, 13-15 Dec 2013 in New Delhi.
13. Oral presentation entitled “Conducting gold nanoparticles-polypyrrole nanocomposite film based potentiometric urea biosensor” in international conference on Emerging Technologies: Micro to Nano 2013 (ETMN-2013), 22-23 Feb 2013, Goa.
14. Attended an international conference APA-2013 with a poster presentation “Structural and impedance spectroscopic studies on biofunctionalized Poly(pyrrole-co-pyrrolepropylyc acid) film” in International Conference on Polymers on the Frontiers of Science & Technology, Asian Polymer Association-2013, 21-23 Feb 2013 in Chandigarh.
15. Poster presented “Electrochemically synthesized polypyrrole-pyrrolepropylyc acid film based immunosensor for the detection of Myoglobin” on National Science Day in National Physical laboratory, 27 Feb 2012, New Delhi.
16. Poster presented “Interdigitated micro electrode based microfluidic device for the detection of uric acid” on Progress in Physics of Material and theoretical physics organized by DRS program, Physics Department, Jamia Millia Islamia, 3<sup>rd</sup> Feb 2012, New Delhi. **This poster won Best poster award.**
17. Attended “Workshop on materials characterization techniques (WMCT-2010)” in National Physical Laboratory, 12-16 July 2010, New Delhi.
18. Poster entitled “A Modified Interdigitated Micro-Electrode Embedded Micro-Fluidic Device for the Detection of Uric Acid” in International Conference on Science & Technology of Synthetic Metals, 4-10 July 2010 in Kyoto, Japan.
19. Poster entitled “Electrochemical uric acid biosensor using interdigitated microelectrode” in Recent advances in Analytical Sciences, 12-14 April 2010, Himachal Pradesh University, Shimla, India. **This poster won Best poster award.**
20. Attended two days workshop on “Fiber Optics & Applications” organized by IEEE EDS Delhi Chapter, Department of Electronic Science, University of Delhi South Campus and Aryabhata Science Forum, Deen Dayal Upadhyaya College, University of Delhi, in SP Jain Centre, University of Delhi, 28-29 November 2009, Delhi.
21. Attended a conference on “International Convention on Solar Photo Voltaic’ 09” in Guru Gobind Singh Indraprastha University, 5th October 2009, Delhi.

## REFERENCES

- **Dr. Bipin Kumar Gupta**  
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- **Dr. Asad Niazi**  
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- **Dr. Rajesh**  
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