

**Dr. Nilesh Pandey**

**Assistant Professor**

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**Educational Qualification:**

July 2012- **Ph.D. (Molecular Oncology/ Applied Sciences)**  
October 2019 P.D. Patel Institute of Applied Sciences (PDPIAS),  
Charotar University of Science and Technology (CHARUSAT),  
Changa, 388421, Anand, India  
**Thesis:** "Detection of TLR4 polymorphisms and their association with STIs, cervicitis and cervical cancer."

June 2010-May **M.Sc. Biochemistry**  
2012 PDPIAS,  
CHARUSAT, Changa, 388421, Anand, India  
Grades: 78.62%  
**Research Project:** "Genetic Association Studies of SMOC2 & Inducible Nitric Oxide Synthase Gene Single Nucleotide Polymorphisms (rs13208776, Inos-954, Ex16+14) in the Pathogenesis of Vitiligo in Gujarati Population"

June 2007- May **B.Sc. Biochemistry**  
2010 St. Xaviers College  
Gujarat University  
Ahmedabad- 380009, Gujarat, India  
Grades: 67%

**Additional Research Experience**

December 2014- Worked on research Project entitled "**To study anti-cancer effects of phosphonium ionic liquids on HPV positive and negative cell line**" sponsored by Gujarat Council  
March 2017 On Science and Technology (GUJCOST), India.

February 2016- Worked as a Doctoral Fellow on Research Project entitled "**Detection of high risk HPVs, Chlamydia trachomatis, Neisseria gonorrhoeae and Trichomonas vaginalis infection and their association with TLR 4 and 9 SNPs to identify susceptibility markers in cervical cancer and cervicitis patients**" sponsored by CHARUSAT  
March 2019

## Research Publications:

- 2021 **Pandey, N. \***, Chauhan, A. \*, Raithatha, N., Patel, P., Khandelwal, R., Desai, A., Choxi, Y., Kapadia, R. and Jain, N., 2021. Influence of TLR4 and TLR9 polymorphisms and haplotypes on multiple hrHPV infections and HPV16 copy number in cervical cancer and cervicitis. **Microbial Pathogenesis**, 159, p.105149. **Equal Contribution Authors \***
- 2021 Patel, D., Shah, U., Patel, A., Patel, S., Patel, M., Patel, A., Patel, S., Solanki, N. and **Pandey, N.**, 2022. Comprehensive review on repurposing of approved medicine in the management of COVID-19 infection. **Organic Communications**, 11, p.16.
- 2021 Chauhan, A., **Pandey, N.** and Jain, N., 2021. A review of methods for detecting single-nucleotide polymorphisms in the Toll-like receptor gene family. **Biomarkers in Medicine**, 15(13), pp.1187-1198.
- 2021 Shah, U., Patel, S., Patel, M., Jain, N., **Pandey, N.**, Chauhan, A. and Patel, A., 2021. In-vitro Cytotoxicity and Aromatase Inhibitory Activity of Flavonoids: Synthesis, Molecular Docking and In-silico ADME Prediction. **Anti-cancer Agents in Medicinal Chemistry**.
- 2021 Patel, M., **Pandey, N.**, Timaniya, J., Parikh, P., Chauhan, A., Jain, N. and Patel, K., 2021. Coumarin–carbazole based functionalized pyrazolines: synthesis, characterization, anticancer investigation and molecular docking. **RSC Advances**, 11(44), pp.27627-27644.
- 2019 Chauhan, A. \*, **Pandey, N. \***, Desai, A., Raithatha, N., Patel, P., Choxi, Y., Kapadia, R., Khandelwal, R. and Jain, N., 2019. Association of TLR4 and TLR9 gene polymorphisms and haplotypes with cervicitis susceptibility. **PloS one**, 14(7), p. e0220330. **Equal Contribution Authors \***
- 2019 **Pandey, N.\***, Chauhan, A.\*, Raithatha, N., Patel, P., Khandelwal, R., Desai, A., Choxi, Y., Kapadia, R., & Jain, N., 2019. Association of TLR4 and TLR9 polymorphisms and haplotypes with cervical cancer susceptibility. **Scientific Reports**; 9(1):9729 **Equal Contribution Authors \***
- 2018 **Pandey, N.**, Chauhan, A., & Jain, N., 2018. TLR4 Polymorphisms and Expression in Solid Cancers. **Molecular Diagnosis & Therapy**; 22(6):683-702.
- 2018 Chauhan, A., **Pandey, N.**, Raithatha, N., Patel, P., Desai, A., & Jain, N. (2018). Absence of toll-like receptor 9 Pro99Leu polymorphism in cervical cancer. **F1000Research**, 7.
- 2018 **Pandey, N.**, Chauhan, A., Raithatha, N., Patel, P., Desai, A., & Jain, N., 2018. Absence of association between TLR4 Thr399Ile polymorphism and cervical cancer susceptibility. **Meta Gene**, 17, 249-255.

**Technical Skills:**

**Molecular Biology** DNA and RNA isolation, PCR, Real-time PCR, SNP analysis, RFLP, Gene expression analysis, Absolute quantification by Real-time PCR, Agarose and Polyacrylamide Gel electrophoresis, SDS-PAGE

**Cell Culture** Maintenance and growth of human cervical cancer cell lines (SiHa, HeLa, CaSki, C33A, MCF-7, NCI-H520, A375), MTT assay, Growth curve, cell cycle analysis, DNA fragmentation assays, Apoptosis

**Bioinformatics** Molecular docking, Primer designing, Linkage disequilibrium analysis

**Biochemistry** Enzyme Assays

**Computer Analytics** SPSS, GraphPad Prism, Haploview, Mendel, Autodock vina, Discover Studio visualizer, Pymol, Clustal Omega, Uniprot, Primer 3, Windows and MS Office.

**Laboratory Management Experience**

*May 2021-till date* **Quality Manger and Technical Manager**  
**Molecular Diagnostic Laboratory, CHARUSAT**  
Real time PCR based Tests available for RNA viruses: Dengue, Chikungunya, HCV and SARS-CoV-2

**Teaching Experiences:**

*March 2020-till date* **Assistant Professor**  
**Bapubhai Desai bhai Patel Institute of Paramedical Sciences, CHARUSAT, Changa, India**  
Cell & Cancer Biology, Stem cell technology, Molecular Biology

*January 2018-December 2018* **Teaching Assistant**  
**PD Patel Institute of Applied Sciences, CHARUSAT, India**  
Enzymology and Medical biotechnology

*January 2017-July 2017* **Visiting lecturer**  
**Charotar Institute of Paramedical Sciences, CHARUSAT, India**  
Immunology

*July 2015-June 2016* **Teaching Assistant**  
**PD Patel Institute of Applied Sciences, CHARUSAT, India**  
Biophysics and Immunology

*July 2012-Jan 2019* **Visiting lecturer**  
**Manikaka Topawala Institute of Nursing, CHARUSAT, India**  
Clinical Genetics and Biochemistry

### Awards and Achievements:

14<sup>th</sup> to 18<sup>th</sup>  
October, 2019 Served as **Resource Person** in “**Hands on Training on Cell Culture and Molecular Biology Techniques**” organized by Ramanbhai Patel College of Pharmacy, CHARUSAT

25<sup>th</sup> to 27<sup>th</sup>  
September, 2019 Won “**Young Researcher Award**” for **oral presentation** entitled “Association of TLR4 and TLR9 polymorphisms and haplotypes with cervical cancer susceptibility” at **International Conference on Molecular Medicine, MOLMED-2019**

26<sup>th</sup> December  
2016-10<sup>th</sup>  
January 2017 Served as an **External Expert** for the validation of the product “**Xpress DNA tissue mini kit**” at **MagGenome Technologies Pvt Ltd, Cochin, Kerala, India**

Participated in the “**Global HPV LabNet proficiency study 2014**” of HPV International Reference Center, Karolinska Institute and Hospital, Stockholm, Sweden

### Research Interest:

- Identification and evaluation of genetic basis of human diseases
- Development of new molecular diagnostic approaches for detection of infectious human diseases
- Identification of new DNA based markers (susceptibility/diagnostic) in cancer and other inflammatory diseases.
- Evaluation and screening of novel anti-cancerous agents through various *in-vitro* and *in-vivo* assays.

### Conference, Posters & Proceedings

13<sup>th</sup> – 16<sup>th</sup>  
February, 2013. **N. Pandey, A. Chauhan, V. Nandurbarkar, N. Raithatha, C. Haritha, N. Jain, \*** “**Genetic polymorphism of CYP450, GST genes and HPV infection in cervical cancer patients from Charotar region of Gujarat, India – A Preliminary Analysis**” at “32nd Annual Convention of Indian Association for Cancer Research” organised by Indian Association for Cancer Research, New Delhi.

9<sup>th</sup> November,  
2014. **Nilesh Pandey, Nitin Raithatha, Monica Gupta, Neeraj Jain\*** “**Detection of TLR4 (Asp299Gly) Single Nucleotide Polymorphism and prevalence of HPV infection in cervical cancer and cervicitis patients of Gujarat, India.**” in “Science Meet - 2014” organized by at P. D. Patel Institute of Sciences and Technology, CHARUSAT University, Changa, Anand, Gujarat, India.

24<sup>th</sup> November,  
2014 **Nilesh Pandey, Rubina Polara, Alex Chauhan, Nitin Raithatha, Monica Gupta, Neeraj Jain** “**Detection of High-Risk Human Papillomaviruses (HR-HPVs) in addition to HPV16 and 18 in Cervical Cancer Patients from Gujarat, India**” at “International Symposium on Recent Trends in Cancer Research: From OM to OMICS”, GCRI, Ahmedabad.

19<sup>th</sup> to 21<sup>st</sup>  
February, 2015 **Alex Chauhan, Nilesh Pandey, Nitin Raithatha, Monica Gupta and Neeraj Jain** “**Human Papillomavirus Infection and Association of TLR4 and 9 Gene**

**Polymorphisms with Cervical Cancer in Gujarat, India**” at 34th Annual Convention of Indian Association for Cancer Research–Jaipur

*4<sup>th</sup> to 7<sup>th</sup> February 2016* Alex Chauhan, **Nilesh Pandey**, Nitin Raithatha, Smruti Vaishnav, and Neeraj Jain **“Human Papillomavirus Infection in Chronic Cervicitis: Adding Insult to Injury!”** at “6<sup>th</sup> International Translational Cancer Research Conference” Ahmedabad.

*9<sup>th</sup> -11<sup>th</sup> February, 2017* Neeraj Jain, **Nilesh Pandey**, Alex Chauhan, Nitin Raithatha and Purvi Patel **“Evaluation of TLR4 and TLR9 gene single nucleotide polymorphisms in Cervical Cancer patients of Gujarat”** at “36th Annual Conference of IACR”, , Amala Cancer Research Centre, Thrissur, Kerala

*25<sup>th</sup> to 27<sup>th</sup> September, 2019* **Nilesh Pandey**, Alex Chauhan, Nitin Raithatha, Purvi Patel, Ronak Khandelwal, Ajesh Desai , Yesha Choxi, Rutul Kapadia and Neeraj Jain **“Association of TLR4 and TLR9 polymorphisms and haplotypes with cervical cancer susceptibility”** at International Conference on Molecular Medicine, MOLMED-2019

*25<sup>th</sup> March, 2022* Himisa M. Shah, Princy R. Patel, Riddhi D. Patel, **Nilesh Pandey**, Hemant Kumar, Darshan Patel **“Development of Restriction Digestion based process for detection of SARS-CoV-2 Variant Omicron”** A colloquim of Immunology, Infection Biology and Vaccine Research, Bapubhai Desai bhai Patel Institute of Paramedical Sciences, Charotar University Of Science and Technology

*25<sup>th</sup> March, 2022* Rutvi Bhesaniya, Divya Sindhav, Shivani Patel, Kirti Katke, **Nilesh Pandey\***, Sanni Kapatel **“Investigation of cytotoxic property of MOS2 nanoparticles against breast cancer cell line MCF-7”** A colloquim of Immunology, Infection Biology and Vaccine Research, Bapubhai Desai bhai Patel Institute of Paramedical Sciences, Charotar University Of Science and Technology

#### **Workshops:**

*11<sup>th</sup> March, 2016* “Science Communication Workshop” organized by The Wellcome Trust/ DBT India Alliance”, at The Maharaja Sayajirao University of Baroda, Vadodara, India.

*28<sup>th</sup> – 29<sup>th</sup> September, 2013* “Patent Drafting Program” at P. D. Patel Institute of Sciences and Technology, CHARUSAT University, Changa, Anand, Gujarat, India.