

PUBLICATIONS

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Journals:

1. Acharya S., **Patel G.K.***, Khan M.A., Clark A.M., Saranyutanon S., Anand S. (2026) Receptor signaling in cancer progression: decoding complexity to reimagine therapeutic strategies. *Frontier in Cell & Developmental Biology (In Press)*.
2. Kaur N., Singh A., Desai N., Vora L., **Patel G.K.**, Chandra P., Prasad R. (2026) Nanoengineered delivery systems and solid tumor: major challenges and opportunities. *ACS-Molecular Pharmaceutics (Revised)*
3. Mahato K., **Patel G.K.***. (2026) Bioelectronics for in situ Monitoring of Tumor Microenvironment Markers: A Perspective. *Nanotheranostics (Accepted)*
4. Baral M.R., Hassan Abushukair H., Abdelrahim M., Abdullah E., Diffalha S.A., Manne U., Singh A.P., **Patel G.K.**, Bhandari S., Moh'd Khushman (2025). Ataxia Telangiectasia Mutated (ATM) gene alterations as biomarkers of response to Immune Checkpoint Inhibitors. *Immunotherapy*, [Link](#)
5. Khedmatgozar H., Dutta S., Dominguez M., Raju M., **Patel G.K.**, Latour D., Johnson M.K., Fokar M., Warraich I., Haynes A., Maurer B.J., de Riese W.T.W., Brandi L., Matusik R., Tripathi M., Nandana S. (2025). TIAM1 drives prostatic branching phenotype and is a potential therapeutic target for benign prostatic hyperplasia. *JCI Insight*, 10(12): e188062. [Link](#)
6. Singh A., Dubey R., Swain R.P., **Patel G.K.**, Singh S.K., Chandra P. (2025) From Lab to Leaf: Advances in Nano-biosensors for Real-time Plant Health Monitoring. *Plant Nano Biology*. (In Press)
7. Saloni S., Sachan M., Rahul, Verma R.S., **Patel G.K.*** (2025). SOXs: Master architects of development and versatile emulators of oncogenesis. *BBA: Review on Cancer* 1880(2):189295. *Corresponding author. [Link](#)
8. Dutta S., Khedmatgozar H., **Patel G.K.**, Latour D., Welsh J., Tripathi M., Nandana S. (2024). TBX2-driven switch from androgen receptor to glucocorticoid receptor signaling confers therapeutic resistance in prostate cancer. *Oncogene*, 44(13):877-892. [Link](#)
9. Dkhar D.S., Swain R.S., Dubey R., **Patel G.K.**, Chandra P. (2025). Plant-derived enzymes as sustainable biocatalysts for biosensing and industrial applications. *Industrial Crops and Products*, 233, 121336. [Link](#)
10. Praharaj C., Saloni, Patel G.K.*., Nara S. (2025) Plant biomass-derived nanomaterials for biosensing and bioimaging applications. *Industrial Crops and Products*, 231, 121048. [Link](#)
11. Keshari R., Dewani M., Kaur N., **Patel G.K.**, Singh S.K., Chandra P., Prasad R., Srivastava R. (2025). Lipid nanocarriers as precision delivery systems for brain tumours. *ACS- Bioconjugate Chemistry*, 36(3):347-366. [Link](#)
12. Shahi A., and **Patel G.K.*** (2024). In silico investigation identifies phytochemicals as anticancer agents targeting EGFR. *Biotech Innovators* 2(1) 44-46. [Link](#) *Corresponding author.
13. **Patel G.K.***, Verma S.K., Misra S., Chand G., Rao, R.N. (2023) Molecular drivers of prostate cancer pathogenesis and therapy resistance. *Frontiers in Cell and Developmental Biology*, 11:1-3. *Corresponding author. [Link](#)
14. Verma P., Shukla N., Kumari S., Ansari M.S., Gautam N.K., **Patel G.K.*** (2023). Cancer stem cells in prostate cancer progression, metastasis, and therapy resistance. *BBA: Review on Cancer*, 1878(3), 188887. *Corresponding author. [Link](#)
15. Srivastava S.K., Khan M.A., Zubair H., Anand S., Deshmukh S.K., **Patel G.K.**, Singh S., Andrew J. Wang B., Carter J.E., Singh A.P. (2022). MYB interacts with androgen receptor, sustains its ligand-

independent activation, and promotes castration resistance in prostate cancer. *British Journal of Cancer*, 126(8):1205-1214. [Link](#)

16. Patel G.K., Dutta S., Syed M.M., Ramachandran S., Sharma M., Rajamanickam V., Ganapathy V., DeGraff D.J., Pruitt K., Tripathi M., Nandana S. (2021) TBX2 drives neuroendocrine prostate cancer through exosome-mediated repression of miR-200c-3p. *Cancers*, 13(19), 5020. [Link](#)
17. Kumar S., Patel G.K., Ghoshal U.C. (2021) *Helicobacter pylori*-induced inflammation: Possible factors modulating the risk of gastric cancer. *Pathogens*, 10(9), 1099. [Link](#)
18. Khushman M., Prodduturvar P., Mneimneh W., Zotto V.D., Akbar S., Grimm L., Rider P., Hunter J., Alkharabsheh O., Patel G.K., Fabregas J., Singh A.P. (2021) The impact of neoadjuvant concurrent chemoradiation on exosomal markers (CD63 and CD9) expression and their prognostic significance in patients with rectal adenocarcinoma. *Oncotarget*, 12:1490-1498. [Link](#)
19. Khushman M., Patel G.K., Maharjan A.S., McMillin G.A., Nelson C., Wang B., Hosein P., Singh A. P. (2021). The prevalence and clinical relevance of 2R/2R TYMS genotype in patients with gastrointestinal malignancies treated with fluoropyrimidine-based chemotherapy. *The Pharmacogenomics Journal*, 21(3):308–317. [Link](#)
20. Patel G.K.*, Zubair H.*, Khan M.A., Shafquat A., Zubair A., Singh S., Srivastava S.K., Singh A.P. (2020) Proteomic analysis of MYB-regulated secretome identifies functional pathways and biomarkers: potential pathobiological and clinical implications. *Journal of Proteome Research*, 19 (2):794–804. *Shared first Author. [Link](#).
21. Khan M.A., Srivastava S.K., Zubair H., Patel G.K., Arora S., Khushman M., Carter J.E., Gorman G.S., Singh S., Singh A.P. (2020) Co-targeting of CXCR4 and hedgehog pathways disrupts tumor–stromal cross-talk and improves therapeutic efficacy in a mouse model of pancreatic cancer. *Journal of Biological Chemistry*, 295(25):8413-8424. [Link](#)
22. Patel G.K., Perry J., Abdul-Rahim O., Frankel A.E., Cameron D., Taylor W.R., Rocconi R.P., Khushman M., Nelson C., Singh A.P. (2020) EGFR activating E746_T751>VP mutation (E746_T751>VP) in pancreatic ductal adenocarcinoma responds to erlotinib, followed by EGFR A647 T-mediated resistance: A case report and literature review. *Journal of Cancer Research and Therapeutics*, 16(4):950-954. [Link](#)
23. Patel G.K., Chugh N., Tripathi M. (2019) Neuroendocrine differentiation of prostate cancer - An intriguing example of tumor evolution at play. *Cancers*, 11(10): 1405. [Link](#)
24. Kanchanapally R., Deshmukh S.K., Chavva S.R., Tyagi N., Srivastava S.K., Patel G.K., Singh A.P., Singh S (2019) Drug-loaded exosomal preparations from different cell types exhibit distinctive loading capability, yield, and antitumor efficacies: a comparative analysis. *International Journal of Nanomedicine*, 14: 531-541. [Link](#)
25. Patel G.K., Khan M.A., Zubair H., Srivastava S.K., Patton M.C., Singh S., Khushman M., Singh A.P. (2019) Comparative analysis of exosome isolation methods for optimum yield, purity and downstream applications, *Scientific Reports*, 9(1):5335 [Link](#)
26. Maharjan A.S., McMillin G.A., Patel G.K., Awan S., Taylor, W.R., Pai, S., Frankel A.E., Nelson C., Wang B., Hosein, P.J., Singh A.P., Khushman M. (2019) The prevalence of DPYD*9A (c.85T>C) genotype and the genotype-phenotype correlation in patients with gastrointestinal malignancies treated with fluoropyrimidines: Updated analysis. *Clinical Colorectal Cancer*, 18(3): e280-e286. [Link](#)
27. Khushman M., Patel G.K., Laurini J.A., Bhardwaj A., Roveda K., Donnell R, et al. (2019) Exosomal Markers (CD63 and CD9) expression and their prognostic significance using immunohistochemistry (IHC) in patients with pancreatic ductal adenocarcinoma (PDAC). *Journal of Gastrointestinal Oncology*, 10(4):695-702. [Link](#)
28. Patel G.K., Khushman M., Singh S., Taylor W.R., Singh A.P (2018) Revisiting the Clinical importance of DPYD*9A (c.85T>C) variant of dihydropyrimidine dehydrogenase (DPYD) gene in patients treated

with fluoropyrimidine-based chemotherapy. *Journal of Molecular Biomarkers & Diagnosis*, 9(3), 1000394. [Link](#)

29. Khushman, M., **Patel G.K.**, Hosein, P.J., Laurini, J.A., Cameron D., Clarkson D.R., Butler T.W., Norden C.W., Balmi J., Wilma V., Bhadkamkar S., Nelson C., Lee F., Singh A.P., Taylor W.R. (2018) Germline pharmacogenomics of dihydropyrimidine dehydrogenase (DPD) enzyme in patients with gastrointestinal (GI) malignancies treated with fluoropyrimidines. *Journal of Gastrointestinal Oncology*, 9(3) 416-424. [Link](#)

30. Khan M.A., **Patel G.K.**, Srivastava S.K., Singh S., and Singh A.P. (2018). Looking at cancer health disparities without the colored lenses. *Cancer Health Disparities*, 2: e1-e9. [Link](#)

31. **Patel G.K.**, Khan M.A., Bhardwaj A., Srivastava S.K., Zubair H., Patton M.C., Singh S., Khushman M., Singh A.P. (2017) Exosomes confer chemoresistance to pancreatic cancer cells by promoting ROS-detoxification and miR-155-mediated suppression of key gemcitabine-metabolizing enzyme, DCK. *British Journal of Cancer*, 116: 609–619. [Link](#)

32. Khushman M., Bhardwaj A., **Patel G.K.**, Laurini J.A., Roveda K., Tan M., Patton M.C., Singh S., Taylor W., Singh A.P. (2017) Exosomal markers (CD63 and CD9) expression pattern using immunohistochemistry (IHC) in resected malignant and non-malignant pancreatic specimens. *Pancreas*, 46(6): 782-788. [Link](#)

33. Zubair H., Bhardwaj A., Ahmad A., Khan M.A., Srivastava S.K., Patel G.K., Singh S., Sing A.P. (2017) Hydroxytyrosol induces apoptosis, cell cycle arrest, and suppresses multiple oncogenic signaling pathways in prostate cancer cells. *Nutrition and Cancer*, 69 (6): 1-11. [Link](#)

34. Srivastava SK., Ahmad A., Miree O., **Patel G.K.**, Singh S., Rocconi RP., Scalici J., and Singh AP. (2017) Racial health disparities in ovarian cancer: not just black and white. *J. Ovarian Research*, 10:58. [Link](#)

35. Zubair H., Azim S., Srivastava S.K., Ahmad A., Bhardwaj A., Khan M.A., **Patel G.K.**, Sumit Arora, Carter J.E., Singh S., Singh A.P. (2016). Glucose metabolism reprogrammed by overexpression of IKK-epsilon promotes pancreatic tumor growth. *Cancer Research*, 76(24):7254-7264. [Link](#)

36. Khan M.A., Azim S., Zubair H., Bhardwaj A., **Patel G.K.**, Khushman M., Singh S., Sing A.P. (2017). Molecular drivers of pancreatic cancer pathogenesis: looking inward to move forward. *International Journal of Molecular Sciences*, 18: 779. [Link](#)

37. Zubair H., Azim S., Ahmad A., Khan M.A., **Patel G.K.**, Singh S., Singh A.P. (2017) Cancer chemoprevention by phytochemicals: nature's healing touch. *Molecules*, 22(3): 395. [Link](#)

38. **Patel G.K.**, Paton M.C., Khusman M., Singh S., Singh A.P. (2016) Pancreatic cancer exosomes: shedding off for a meaningful journey. *Pancreatic Disorders & Therapy*, 6:2 e148. [Link](#)

39. Verma P., **Patel G.K.**, Kar B., Sharma A.K. (2017) A case of neofunctionalization of a PNP protein to trypsin inhibitor by disrupting the PNP-UDP domain through an insert containing inhibitory site. *Plant Science*, 260: 19-30. [Link](#)

40. Kar B., Verma P., **Patel G.K.**, Sharma A.K. (2017) Molecular cloning, characterization, and *in silico* analysis of a thermostable β -glucosidase enzyme from *Putranjiva roxburghii* with a significant activity for cellobiose. *Phytochemistry*, 140:151-165. [Link](#)

41. Tomar P.P., Chaudhary N.S., Mishra, P., Gahlot D., **Patel G.K.**, Selvakumar P., Sharma A.K. (2014) Purification, characterization and cloning of a 2S albumin with DNase, RNase and antifungal activities from *Putranjiva roxburghii*. *Applied Biochemistry and Biotechnology*, 174: 471–482. [Link](#)

42. Bali S., **Patel G.K.**, Novy R., Vining K., Thompson A., Brown C., Holm D., Porter G., Endelman J., Sathuvalli V. (2018) Evaluation of genetic diversity among Russet potato clones and varieties from breeding programs across the United States. *Plos One*, 13(8): e0201415. [Link](#)

43. **Patel G.K.**, Gupta A.K., Gupta A., Mishra M., Singh P., Saxena A.K., Sharma A.K. (2013) Purification and physicochemical characterization of a trypsin inhibitor from *Cassia absus* Linn. *Protein & Peptide Letter*, 21:108-114. [Link](#)

44. Patel G.K. Kawale A.A., Sharma A.K. (2012) Purification and physicochemical characterization of a serine protease with fibrinolytic activity from latex of a medicinal herb *Euphorbia hirta*. *Plant Physiology and Biochemistry*, 52: 104-111. [Link](#)
45. Patel G.K., Kar B., Sharma A.K., (2012) Characterization of a thermostable family 1 glycosyl hydrolase enzyme from *Putranjiva roxburghii* seeds. *Applied Biochemistry and Biotechnology*, 166:523-535. [Link](#)
46. *Patel G.K., *Tapas S., Dhindwal S. and Tomar S. (2011) *In silico* sequence analysis and molecular modeling of the three-dimensional structure of DAHP synthase from *Pseudomonas fragi*. *Journal of Molecular Modeling*, 17 (4): 621-631. (*Shared First Author) [Link](#)
47. Patel G.K., Shee C., Gahlot D., Selvakumar P., Sharma A.K. (2011) Stability of *Murraya koenigii* miraculin-like protein in different physicochemical conditions. *Medicinal Chemistry Research*, 20(9) 1542-1549. [Link](#)

Book Chapters:

1. Mertia J.S., Saloni, Chaurasiya A., Rahul, Patel G.K.* (2025) Unmasking the patterns of health disparities in gallbladder cancer. In: Health disparities in cancer-biology and beyond. Sudan S.K., Dasgupta, S. and Singh A.P. (Eds) **Springer-Nature. *Corresponding Author**
2. Shahi A., Patel G.K.*., Kumar S., Singh M., Varshney A., Ghoshal U.C*. (2024) Production and therapeutic applications of monoclonal antibodies in cancer and other diseases. In Microbial Enzymes Production, Innovations and Applications. *Yadav D., Chowdhary P., Anand G., and Gaur R.K.* (Eds.), John Wiley & Sons Australia Ltd, pp535-568. ISBN: 978-35-273-52906. *Corresponding Author
3. Soni V.K., Amit A., Chandra V., Singh P., Singh P.K., Singh R.P., Patel G.K., Singh R.P. (2022) Role of food additives and intestinal microflora in colorectal cancer. In: *Shukla D., Vishvakarma N.K., Nagaraju G.P.* (Eds.) *Colon Cancer Diagnosis and Therapy* Vol. 3. **Springer**, Cham. pp. 23-49. ISBN: 978-3-030-72701-7 [Link](#)
4. Khan M.A., Patel G.K., Zubair H., Tyagi N., Azim S., Singh, S., Ahmad A., Singh A.P. (2020) Nuclear factor kappa- β : bridging inflammation and cancer, in: *Signaling in Cancer*, *Batra S.K., Ponnusamy M.P.* (Eds.) Vol. 10. **Taylor & Francis** Group-CRC Press. pp. 23-49. ISBN: 978-13-1520-019-4. [Link](#)
5. Patel G.K.* Goyal R., Waheed S.M. (2019) Current update on rapamycin production and its potential clinical implications. In: High Value Fermentation Products Volume 1. *Saran S., Babu V. Chaubey A.* (Eds). pp.145-160. **Scivener Publishing-Wiley** ISBN: 978-11-1946-001-5 *Corresponding Author. [Link](#)
6. Patel G.K., Zubair H., Khan M.A., Srivastava S.K., Ahmad A., Patton M.C., Singh S., Khushman M., Singh A.P. (2018) Exosomes: Key supporters of metastasis, In: *Exosomes in cancer: diagnostic, pharmaceutical, and therapeutic applications*, M.M. Amiji and R. Rajagopal (Eds.). pp. 261-283. Academic Press, **Elsevier**. ISBN: 978-01-2812-774. [Link](#)
7. Zubair H., Azim, S., Khan M. A., Patel G.K. Singh S., Singh A.P. (2018) Epigenetic control of pancreatic carcinogenesis and its regulation by natural products. In: *Epigenetics of Chemoprevention*, *Bishayee, A. and Bhatia, D.* (Eds), pp. 251-270. Academic Press, **Elsevier**. ISBN:978-01-2812-566.
8. Goyal R., Babu V., Patel G.K*. (2013) Biomethane Production. In: "Biofuels Production" *Babu V., Thapliyal A. and Patel G.K.* (Eds.) **Scivener Publishing-Wiley**, pp. 333- 356. ISBN:978-11-1863-450-9 *Corresponding Author. [Link](#)
9. Saxena K., Aseri G.K., Patel G.K., Babu V. (2013) Molecular biology of nitrile metabolizing enzymes. In: *Molecular Biology of Bacteria*. *Gaur R.K., Gautam H.K.* (Eds.) **Nova Science Publisher**, pp. 31-53, ISBN: 978-16-2618-189-2. [Link](#)

c. Edited Book

1. Babu V., Thapliyal A. and Patel G.K. (Eds.) (2013) "Biofuels Production" ISBN: 978-11-1863-450-9 Scrivener Publishing-Wiley, 1303 Chestnut, Ave, Austin, TX-78702. [Link](#)

PUBLICATION/PRESENTATIONS IN CONFERENCES/WORKSHOPS

1. Attended a two-day workshop on "The Impactful Classroom: Design, Engage and Reflect" conducted on July 21-22, 2025, by the Department of Applied Mechanics, MNNIT Allahabad, facilitated by Dr. Sridhar Condoor, St. Louis University, USA.
2. Dutta S., Khedmatgozar, Nandana S., **Patel G.K.**, Tripathi M., A (2025) TBX2-driven signaling switch from androgen receptor to glucocorticoid receptor confers therapeutic resistance in prostate cancer. *Endocrinology*, 166, (Suppl. 1), bqaf043.004. [Link](#)
3. Khushman M., Abushukair H., Modekurty H., **Patel G.K.**, et al. (2025) Integrative characterization of pathogenic KRAS mutations in colorectal cancer: Implications for immunotherapy. *Cancer Research* AACR-2025.
4. Khushman M., Abushukair H., Modekurty S., **Patel G.K.**, Abdelrahim M., Abdullah E., Maun Baral M., Singh A.P. (2024) The association between different molecular alterations in Wnt/β-catenin signaling and response to treatment with immune checkpoint inhibitors in solid tumors. *Journal for ImmunoTherapy of Cancer* (JITC) Abstract No. 169 presented in SITC 39th Annual Meeting & Pre-Conference Programs, November 6 - 10, 2024 in Houston, TX, USA.
5. Dutta S., Patel G.K., Khedmatgozar H., Latour D., Welsh J., Latour D., Tripathi M., Nandana S. (2024) A TBX2-driven signaling switch from androgen receptor to glucocorticoid receptor confers enzalutamide resistance in prostate cancer. *Cancer Research* (2024) 84 (6_Supplement)6603. <https://doi.org/10.1158/1538-7445.AM2024-6603>
6. Attended a one-day workshop on "Grant writing Project Proposal" organized by the Office of Dean Research & Consultancy, MNNIT Allahabad on Dec 6th, 2023.
7. **Patel G.K. (2023)** Exosomes in cancer progression, metastasis, and theragnostic. An oral presentation during the 10th International Conference at Invertis University, Bareilly, organized on November 3-4, 2023.
8. **Patel G.K.**, Dutta S., Khedmatgozar H., Tripathi M., Nandana S. (2023) TBX2^{high}miR-375-3p^{low}RBPJ^{high} signaling drives prostate cancer bone metastatic phenotype via exosomes. *Cancer Research*, 83 (2_Supplement_2): B024. [Link](#)
9. Dutta S., **Patel G.K.**, Khedmatgozar H., Latour D., Tripathi M., Nandana S. (2023) TBX2 acts as a molecular switch to downregulate androgen receptor and upregulate glucocorticoid receptor signaling in castrate resistant prostate cancer. *Cancer Res* (2023) 83 (7_Supplement): 1445. [Link](#)
10. **Patel G.K., Kanchanapally R.**, Singh A. P., Singh S. (2022) Exosome in cancer therapy: Screening for drug loading capability, yield, and antitumor efficacies in pancreatic cancer. Poster presented in the 2nd International Precision Medicine Symposium organized at King George Medical University, Lucknow, India, on 7th December 2022.
11. **Patel G.K., Tripathi M., Nandana S** (2022) TBX2 promotes stemness phenotypes in prostate cancer cells by regulating SOX2 and N-MYC in an exosome-dependent manner in a National Symposium on Stem Cell and Cellular Therapy in Human Diseases at Stem Cell Research Center SGPGIMS Lucknow on Nov 18, 2022.
12. **Patel G.K., Dutta S., Khedmatgozar H., Tripathi M., Nandana S.** (2022) TBX2 promotes prostate cancer bone-metastatic phenotype through exosomal microRNA-375-3p. In: Proceedings of the American Association for Cancer Research Annual Meeting 2022; 2022 Apr 8-13. Philadelphia (PA): AACR; *Cancer Research* 2022;82(12_Suppl): Abstract nr 5999. [Link](#)
13. **Patel G.K., Dutta S., Syed M.M., Ramachandran S., Sharma M., Rajamanickam V., Ganapathy V., DeGraff D.J., Pruitt K., Tripathi M., Nandana S.** (2021) TBX2 Drives Neuroendocrine Prostate Cancer

through Exosome-Mediated Repression of miR-200c-3p. Presented orally in the Society for Basic Urologic Research (SBUR), Nov 4-7, 2021, USA.

14. Khushman M., Prodduturvar P., Akbar S., Mneimneh W., Zotto V.D., Grimm L., Rider P., Hunter J., Patel G.K., Singh A.P. (2021) The effects of neoadjuvant chemoradiation on exosomal markers (CD63 and CD9) expression in patients with locally advanced rectal adenocarcinoma. *Journal of Clinical Oncology*, 39 (3_suppl.)101 was presented in the American Society of Clinical Oncology Gastrointestinal Cancers Symposium (ASCO GI), Jan 15-17, 2021. [Link](#)
15. Prodduturvar P., McCormick B., Mneimneh W., Zotto V.D., Grimm L., Rider P., Hunter J., Iliff G., Smith C., Patel G.K., Pannell L., Singh S., Singh A.P., Perry J., Khushman M. (2019) Exosomal markers (CD63 and CD9) expression using immunohistochemistry (IHC) in patients with right-sided and left-sided colon cancer. *Journal of Clinical Oncology*, 37 (15_suppl.) e15119. In the ASCO Annual Meeting, May 31-June 4, 2019, in Chicago [Link](#)
16. Maharjan A.S., McMillin G.A., Patel G.K., Awan S., Taylor W.R., Pai S., Frankel A.E., Nelson C., Wang B., Hosein P.J. Singh A.P., Khushman M. (2019). The correlation between DPYD*9A (c.85T > C) genotype and dihydropyrimidine dehydrogenase deficiency phenotype in patients with gastrointestinal malignancies treated with fluoropyrimidines: Updated analysis. *Journal of Clinical Oncology*. 37 (4_suppl) 544. In the American Society of Clinical Oncology Gastrointestinal Cancers Symposium (ASCO GI), Jan 15-17, 2021. [Link](#)
17. Maharjan A.S., McMillin G.A., Patel G.K., Khushman M. (2019) The Correlation between DPYD*9A(c.85T>C) genotype and dihydropyrimidine dehydrogenase deficiency phenotype in patients with gastrointestinal malignancies treated with fluoropyrimidines *American Journal of Clinical Pathology*, 152(1) S29-S30. In the 54th Annual Meeting for the Academy of Clinical Laboratory Physicians and Scientists, May 30th to June 1st, 2019, at the Little America Hotel in Salt Lake City, Utah.
18. Patel G.K., Khan M.A., Zubair H., Srivastava S.K., Patton M.C., Singh S., Khushman M., Singh A.P. (2019) Exploring the potential of exosomes for cancer diagnosis and management: comparative analysis of isolation methods for optimum yield, purity and downstream applications. *Cancer Research*, 79(13 Suppl): Abstract nr 1991. In 110th AACR Annual Meeting 2019; March 29-April 3, 2019; Atlanta, GA, USA. [Link](#)
19. Srivastava S.K., Zubair H., Patel G.K., Deshmukh S.K., Khan M.A., Andrew J. Wang B., Carter J.E., Singh S., Singh A.P. (2019) A novel MYB-AR cross-talk promoting castration-resistance in prostate cancer. *Cancer Research*, 79(13 Suppl): Abstract nr 2609. [Link](#)
20. Khan M.A., Patel G.K., Srivastava S.K., Zubair H., Singh S., Khushman M., Wang B., Singh A.P. (2019) Bi-directional cross-talk of pancreatic cancer and stellate cells, mediated through CXCR4 and hedgehog pathways, promotes chemoresistance via its effect on gemcitabine metabolism, ROS detoxification and cancer stemness. *Cancer Research*, 79(13 Suppl): Abstract nr 1911. [Link](#)
21. Kanchanapally R., Deshmukh S.K., Chavva S.R., Tyagi N., Srivastava S.K., Patel G.K., Singh A.P., Singh S. (2019) Comparative analyses of drug-loaded exosomal preparations from different cell types reveal distinctive loading capability, yield, and anti-tumor efficacies. *Cancer Research*, 79 (13 Suppl): Abstract nr 992. [Link](#)
22. Awan S., Patel G.K., Maharjan A.S., McMillin G.A., Taylor W., Pai, S., Frankel A., Cameron D., Smith C., Grimm L., Rider P., Hunter J., Liles S., Nelson C. Wang Bin, Hosein P.J., Singh A.P., Khushman M. (2019) Germline pharmacogenomics of thymidylate synthase gene in patients with gastrointestinal malignancies treated with fluoropyrimidines-based chemotherapy regimens. *Journal of Clinical Oncology* 37 (4_suppl.) 545. [Link](#)
23. Khushman M., Bhardwaj A., Patel G.K., Laurini J., Roveda K., Donnell R., Sherling K., Case B., Tan M.C.B., Thompson L.W., Nelson C., Wyatt M., Patton M., Singh S., Wang B., Taylor W.R., Singh A.P. (2018) The Prognostic significance of exosomal markers (CD63 and CD9) expression using immunohistochemistry in patients with pancreatic ductal adenocarcinoma. *Journal of Clinical*

Oncology, 36 (4_suppl.)342. In 2018 ASCO Symposium Cancers of the Pancreas, Small Bowel, and Hepatobiliary Tract held on Jan. 18-20, 2018 [Link](#)

24. Khushman M., **Patel G.K.**, Hosein P.J., Laurini J., Cameron D., Clarkson, D.R., Butler, T.W., Norden C., Balem W., Jones V., Bhadkamkar S., Nelson C., Lee F., Singh AP., Taylor W.R. (2018) Germline Pharmacogenomics of DPYD*9A (c.85T>C) variant in patients with gastrointestinal malignancies treated with fluoropyrimidines. *Journal of Clinical Oncology*, 36(4_suppl.)598. Asco- 2018 Gastrointestinal Cancers Symposium [Link](#)
25. Case B., Khushman M., Bhardwaj A., **Patel G.K.**, Laurini J., Roveda K., Donnell R., Sherling K., Tan M., Thompson Lee, Nelson C., Wyatt M., Singh S., Taylor W., Singh A (2017) The relationship between metastatic status and exosomal marker (CD63) expression using immunohistochemistry (IHC) in patients with pancreatic ductal adenocarcinoma (PDAC). *Annals of Oncology*, 28 (suppl_3) iii74. ESMO 19th World Congress on Gastrointestinal Cancer 28 June-1 July 2017, Barcelona, Spain [Link](#)
26. Bhardwaj A., Khushman M., **Patel G.K.**, Laurini J.A., Roveda K., Tan M., Singh S., Taylor W., Singh A.P. (2016) The pattern of exosomal marker (CD63) expression using immunohistochemistry (IHC) in malignant and non- malignant (normal, inflammatory, and pre-malignant) ductal cells in resected pancreatic tissues. *Cancer Research*, 76(24 Suppl): Abstract no: A36. [Link](#)
27. Khushman M., **Patel G.K.**, Bhardwaj A., Srivastava S.K., Khan M.A., Singh S., Brandt B., Taylor W.R., Singh A. (2016) The role of exosomes in promoting acquired resistance to gemcitabine and nanoparticle albumin-bound (NAB) paclitaxel in pancreatic ductal adenocarcinoma cells. Poster presented in ASCO Annual Meeting Chicago Illinois, June 3-7, 2016. Abstract published in *Journal of Clinical Oncology*, 34 (15_suppl) e23253). 3 - 7 Jun 2016 McCormick Place, Chicago, United States of America [Link](#)
28. Laurini J., Khushman M., Bhardwaj A., **Patel G.K.**, Tan M., Singh S., Taylor W., Singh A.P. (2016) Exosomal markers (CD63 and CD9) expression by immunohistochemistry (IHC) in pancreatectomy specimens (PS). *Virchows Archiv*, 469 (Suppl 1): S86 Abstract# PS-05-022. In XXXI International Congress of the IAP and 28th Congress of the ESP 25-29 September 2016, Cologne, Germany. [Link](#)
29. **Patel G.K.**, Bhardwaj A., Srivastava S.K., Khan M.A., Singh S., Khushman M., Singh A.P. (2016) Chemotherapy-induced exosomal secretion promotes chemoresistance in pancreatic cancer cells. *Cancer Research*, 2016 Jul 15;76(14 Supplement):2116.in 107th Annual Meeting of the American Association for Cancer Research; Apr 16-20; New Orleans, LA. Philadelphia. Abstract nr 2116. [Link](#)
30. Patton M.C., Zubair H., **Patel G.K.**, Singh S, Singh A.P. (2016) Exosomes from hypoxic pancreatic cancer cells confer resistance to subsequent hypoxia insult. *Cancer Research*, 15;76 (14_Supplement):2799. [Link](#)
31. Zubair H., Azim S., Srivastava S.K., Ahmad A., Bhardwaj A., Khan M.A., **Patel G.K.**, Arora S., Carter J.E., Singh S., Singh A.P. (2016) IKK ϵ enhances nuclear-retention and stabilization of c-MYC to promote glycolytic-metabolism and pancreatic tumor growth. American Pancreatic Association 47th Annual Meeting, Boston, MA (October 26-29, 2016). [Link](#)
32. Zubair H., Azim S., Srivastava S.K., Ahmad A., Bhardwaj A., Khan M.A., **Patel G.K.**, Arora S, Carter JE, Singh S, Singh A.P. (2016) IKK ϵ : a novel player in pancreatic cancer pathogenesis. In 18th Annual University of Alabama Birmingham Research Retreat and Research Competition, Birmingham, AL, USA (October 17).
33. **Patel G.K.**, Khan M.A., Bhardwaj A., Srivastava S.K., Zubair H., Patton M.C., Singh S., Khushman M., Singh A.P. (2016) Gemcitabine induced tumor-cell exosomes impart acquired chemoresistance in pancreatic cancer. In 18th Annual Research Retreat at University of Alabama, Birmingham, USA (October 17, 2016).
34. Patton M.C., Zubair H., **Patel G.K.**, Singh S., Singh A.P. (2015) Hypoxic pancreatic cancer cells offer survival benefit through extracellular mechanisms. Poster presented in 9th Annual College of Medicine Research Forum, University of South Alabama, AL USA. (December 4, 2015).

35. Washington-Oregon Potato Conference January from 28-30, 2014 at Three Rivers Convention Center, Kennewick, WA 99336 USA.

36. **Patel G.K.**, Sharma A.K., Gupta A.K., and Saxena A.K. (2013) Studies on protease inhibitor against the protease involved in diseased conditions, an abstract submitted, and poster presented in *5th International Symposium on Current Trends in Drug Discovery Research* at CSIR-CDRI Lucknow from **26-28 February 2013**.

37. Goyal R., Sharma A.K. and **Patel G.K.** * (2013) DAHP synthase from *mycobacterium*: a novel target for the drug design an abstract submitted, and poster presented in *5th International Symposium on Current Trends in Drug Discovery Research* at Central Drug Research Institute (CDRI) Lucknow from **26-28 February 2013**.

38. Goyal R., **Patel G.K.** and Sharma A.K. (2012) SDS induced conformational change enhance the glycosyl hydrolase family 1 enzyme activity, an abstract submitted, and poster presented in *International Interdisciplinary Science Conference (I-ISC)* on protein folding and disease at Jamia Millia Islamia, New Delhi on **December 8-10, 2012**.

39. **Patel G.K.**, Babu V., Rathore N.S. (2012) Biotechnological approach to enhance the alkaline protease production using plasmid transformation in *Bacillus circulans*. An abstract submitted in a National Seminar on “Application of biotechnology to improve industrially important microbial strain' organized by Department of Zoology and Biotechnology, Govt. P.G. College, Guna on **March 30-31, 2012**.

40. Babu, V. Rathore N.S., **Patel G.K.** (2012) Bio-hydrogen from lignocellulosic biomass: The Era is now. An abstract submitted in National Seminar on Application of Biotechnology to improve industrially important microbial strain' orgaised by Department of Zoology and Biotechnology, Govt. P.G. College, Guna on **March 30-31, 2012**.

41. Participated in the National symposium “BIOLOGIK -2012” on recent advances in medical, animal & plant biotechnology, organized by Beehive College of Advance Studies, Dehradun on **March 15-16, 2012**.

42. **Patel G.K.**, Kar B. Sharma A.K. (2011) Presented poster on “Biochemical and biophysical characterization of Glycosyl Hydrolase Family 1 protein from *Putranjiva roxburghii*” in the *7th Asian Biophysics Association (ABA) Symposium & Annual Meeting of the Indian Biophysical Society (IBS)* at AIIMS, New Delhi, Jan **30-Feb 2nd 2011**.

43. Kar B., **Patel G.K.**, Chaudhary N.S., Sharma A.K. (2011) Characterization, Cloning, Sequence Analysis and Modeling of a Trypsin Inhibitor from *Putranjiva roxburghii* in the *7th Asian Biophysics Association (ABA) Symposium & Annual Meetings of the Indian Biophysical Society (IBS)* at AIIMS, New Delhi on **30th Jan to 2nd Feb, 2011**.

44. **Patel G.K.**, Shee C., Gahlot, D., Selvakumar P., Sharma A.K. (2010) Presented poster on “Stability of *Murraya koenigii* miraculin-like protein (MKMLP) in different physicochemical conditions” in **the 4th International Symposium on Current Trends in Drug Discovery Research** at Central Drug Research Institute (CDRI) Lucknow from **17-21st Feb. 2010**.

45. **Patel G.K.** Srivastava A.K., Arora D.K. (2006) Presented poster on “Microbial diversity in the rhizosphere of *Parthenium*” in a National Symposium on Microbial Diversity and Plant Health Problems at DDU Gorakhpur University held on **Dec.18-19, 2006**.

46. Singh R.P., **Patel G.K.**, Srivastava A.K., Arora D.K. (2005) Presented poster on “Herbicidal activity in metabolite produced by fungus in a National Seminar at Shri Murli Manohar Town P.G College Ballia, U.P. held on **October15-17, 2005**.

47. **Patel G.K.** Srivastava, A.K. Arora D.K. (2005) Presented paper on “Role of Microbial metabolite for the control of the *Parthenium* weed” in a National Seminar at Shri Murli Manohar Town P.G College Ballia, U.P. held on **October15 -17, 2005**.

Administrative Responsibilities:

1. Lab OC of UG, PG and Central Instrumentation Facility of Biotech Department
2. Coordinator I-STEM of Department of Biotechnology
3. Departmental Nominated member for the 23rd Convocation-2025, MNNIT Allahabad
4. Nominated member for the 21st Convocation-2024, MNNIT Allahabad
5. Nominated member for the 20th Convocation 2023, MNNIT Allahabad
6. Member of Departmental Meetings, Information and Report committee at MNNIT Allahabad from Jan 2024- to Date)
7. Served and joint secretary and secretary for M.R. Chopra Bhawan (Married Hostel) at IIT Roorkee from Dec 2009-dec 2011)

Trained Several M.Sc. & M. Tech. and Ph.D. Students:

➤ **At MNNIT Allahabad, Prayagraj**

Ph.D.

1. Ms. Jyotsana Singh Marita (Ongoing)
2. Ms. Ayushi Chaurasia (Ongoing)

M. Tech.

1. Tanmay Shrimali: 2026 (ongoing)
2. Ms. Saloni P.G.-2025 : MicroRNA-195-5p mediated regulation of HMGA1 modulates EMT and metastatic phenotypes in gallbladder cancer.
3. Ruchika Goyal

B. Tech.

1. Mr. Somyodeep Barman (U.G.) Data mining and in silico analysis for the identification of novel genes associated with gallbladder carcinogenesis -2024
2. Ms. Krishna Shahoo (U.G.) Unveiling the microRNAs associated with gallbladder pathogenesis: a data-driven exploration. 2024
3. Ms. Muskan (U.G.) PITX1 play important role in pancreatic cancer carcinogenesis. 2025
4. Ms. Pratima (U.G.): Business Development associate at IntelliPaat. 2025
5. Mr. Siddhant Jain (U.G. Reg. No. 20200042) In Silico Data Mining and Identification of Molecular Drivers of Neuroendocrine Prostate Cancer (NEPC)-2025.
6. Shreejan Sharma U.G. 2025: in silico analysis and molecular modelling of SPARC protein and Nab- Paclitaxel
7. Mr. Vinayak Shishodia UG (2025) In silico analysis and molecular modelling of EGFR and HONOKIOL: A potential target for cancer therapy

➤ **At SGPGIMS Lucknow:** Ambuj Shahi, Madhuri Singh, Aarav Patel, and Anshika Varshney

➤ **At TTUHSC Lubbock, TX USA:** Natasha Chugh, Darron Tharp, Vy Do, Mosharaf Mahmud Syed, Kevin Ismail Jabari, Sayanika Dutta, Jonathan Welsh, Hamed and Vishal Bandaru.

- **At Mitchell Cancer Institute, AL, USA-:** Medical students namely, Philip Cato, Garrison Carlos and Rohan Badve.
- **At GEU Dehradun:** Ms. Ruchika Goyal, Mr. Vinay Kumar, Ms. Anju Lohani, Ms. Sunaina Bhan and Ms. Kavita Joshi
- **At IIT Roorkee:** Abhishek Acharya, Vikram Sethi, Ruchika Bajaj, Sumit Saini, Ashish Kawale, Akshita Gupta, and Kiran Lata

ADDITIONAL SCIENTIFIC ACTIVITIES:

- a. **Editorial board member** of different peer reviewed Journals-
 1. Plos One [Link](#)
 2. Medicine - Journals [Link](#)
 3. Indian Journal of Gastroenterology
 4. PeerJ [Link](#)
 5. Frontiers in Cell and Developmental Biology -Prostate Cancer (Guest Editor)[Link](#)
- b. **Member of different Scientific Societies:**
 1. Member of the Royal Society of Biology, UK, Membership ID No. P0165752
 2. American Society of Clinical Oncology (ASCO) Membership ID No. 582419
 3. American Association for Cancer Research (AACR): Associate Membership No. 346261
 4. International Society for Extracellular Vesicles for Membership ID No 67249476
 5. Life member of the Biotech Research Society of India (No. **LM 2960**) from August 2025
 6. Life Member of the American Association of Indian Scientists in Cancer Research (AAISCR).
 7. Life Member of the Indian Motility and Functional Disease Association (IMFDA) Membership No. LM-121/IMFDA.
- c. **Invited reviewer** for different international peer-reviewed Journals e.g.
 1. Journal of Extracellular Vesicles
 2. Scientific Reports
 3. Cancers
 4. Discover oncology
 5. Cancer Reports
 6. Journal of Cancer Research and Clinical Oncology
 7. Biology Direct
 8. Cells
 9. Aging
 10. PLoS One
 11. Oncotarget
 12. Cancer Medicine
 13. Cancer Cell International
 14. Frontiers Oncology
 15. International Journal of Molecular Sciences
 16. Frontiers in Genetics
 17. Journal of Clinical Medicine
 18. Medicine
 19. Functional & Integrative Genomics
 20. Medicinal Chemistry Research

21. Applied Biochemistry & Biotechnology
22. Journal of Basic Microbiology
23. Neural Computing and Applications etc.
24. Healthcare
25. Current Topics in Medicinal Chemistry
26. All Life
27. Frontiers in Pharmacology
28. Functional and Integrative Genomics
29. Current Oncology
30. Computational and Structural Biotechnology Journal
31. Annals of Medicine
- 32.

d. Invited Talks and Presentations:

1. Deliver an expert talk on “Genetic Landscape of Gallbladder Cancer Identifies HMGA1 as a Potential Therapeutic Target, in an international conference at IIT Roorkee jointly organized by BRSI, India, during December 10-14, 2025.
2. Delivered an invited talk on “Patient-derived nanovesicles as diagnostic and therapeutic tools” at IIT BHU in an international conference on Drug Discovery and Translational Healthcare [DDTH 2025] organized during December 2-3, 2025.
3. Delivered an Invited Lecture in the 21st Two-Week Online “NEP Orientation & Sensitization program” on the topic “Assessment of the Research Potential, Conceptualization of a Research Project, and Quality Parameters” under the Malaviya Mission Teacher Training Centre (MMTTC) at the Central University of Punjab on November 19, 2025 (Wednesday) from 09:00 AM to 10:30 AM
4. Deliver an expert talk on “Exosomes in Cancer: Messengers of pathogenesis and tools for therapy’ at the Department of Biotechnology, School of BioSciences and Technology (SBST), VIT Vellore 632014, Tamil Nadu, India, on April 16, 2025.
5. Delivered an invited talk, “Gallbladder Cancer in Northern India: Risk Factors, Regional Trends, and Gender Disparities,” at YN College, Jai Prakash University, Chapra, Bihar, during the State seminar on March 29, 2025
6. Delivered an expert talk entitled “Cancer development, progression, diagnostic and preventive measures ” at Guru Ghasidas Vishwavidyalaya, Bilaspur 495009, Chhattisgarh, India, on March 08, 2025.
7. Delivered an invited talk on “Cell secreted small nanovesicle (exosomes in intercellular communication and Therapeutics: Challenges and New Directions” during a workshop organized by the Department of Chemical Engineering, Indian Institute of Technology (IIT) Jammu, from January 18-19, 2025, on "Micro-Fabrication and Biosensors: Advances in Diagnostics".
8. Presented orally on Patient’s Serum-derived Exosomal miR-122-5p may Serve as a Biomarker for Gallbladder Cancer, during Pan-IIT Meet at ***Indian Institute of Technology Kanpur (IITK)*** scheduled on Dec 6-8, 2024.

9. Delivered an invited talk on Patient's serum-derived exosomal contents may serve as a non-invasive marker development for Gallbladder Cancer during the national conference at DDU Gorakhpur University, Gorakhpur, U.P., November 11-12, 2024.
10. Delivered an invited Talk on Gallbladder cancer: cause, prevention, and challenges in clinical management during an international conference at TPS College at Pataliputra University, Patna, October 18-19, 2024.
11. Delivered an invited Talk on Exosomes in Cancer Progression, Diagnostic and Therapeutic at Indian Institute of Technology (IIT) BHU, Varanasi, October 17, 2024
12. Invited as a speaker and delivered an expert talk on the role of TBX2 in prostate cancer progression and Therapy resistance at the Department of Biotechnology, DDU Gorakhpur University on March 28th, 2024.
13. Invited as a Faculty member and chaired the session during "CME on Diabetic foot management" organized by the Department of Endocrine Surgery, SGPGIMS, Lucknow, India, on November 25, 2023.
14. Invited as a distinguished speaker for a keynote speech on Cancer Biology in the 10th International Conference at Invertis University, Bareilly, India, on November 3-4, 2023.
15. Delivered an invited talk on "Biology of Cancer Cells" on 25th March 2023 Department of Biotechnology, Guru Ghasidas University, Bilaspur, Chhattisgarh, India.
16. Delivered an invited talk on "Proteomics in Medical Research on the foundation Day of Department of Molecular Medicine and Biotechnology, SGPGIMS Lucknow on December 17, 2022.
17. Delivered an invited talk on "Role of exosomes in cancer progression, metastasis, neuroendocrine differentiation and their therapeutics potentials" on April 9, 2022, at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, U.P. India.
18. Delivered an invited talk on "Cancer progression, metastasis, and therapy resistance in prostate Cancer" on May 5, 2022, at Babasaheb Bhimrao Ambedkar University (BBAU) Lucknow, U.P. India
19. Delivered an invited talk on Pancreatic Cancer: Tiny vesicles with mighty roles on June 6, 2021, at National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, India.
20. Delivered an invited talk on Role of Exosomes in Pancreatic Cancer pathobiology, June 10, 2021, CSIR -Indian Institute of Integrative Medicine, Jammu, India.
21. Delivered an invited talk on Pancreatic Cancer pathobiology and Exosome-mediated chemoresistance on Monday, April 17, 2017, in Department of Biotechnology at DDU Gorakhpur University, U.P. India.
22. Delivered an invited talk on Role of exosomes in gemcitabine resistance in pancreatic cancer on Monday, April 10, 2017, in Department of Biotechnology Graphic Era University, Dehradun, Uttarakhand, India.

23. Presented in “Data in Progress” seminar at Mitchell Cancer Institute, Mobile Alabama USA on “Exosomes in pancreatic cancer chemo-resistance: small particles with mighty role” on January 5, 2016.
24. Data were presented several times in Pancreatic Cancer Research Forum (PCRF) group meeting at Mitchell Cancer Institute, Mobile Alabama USA.

e. Organized conference/Seminar/Training/Chaired the session

1. Organized SHODH-SANGAM 2025 on the occasion of the Institute Research and Innovation Day, May 6, 2025, at MNNIT Allahabad.
2. Organizing coordinator of an international conference on “Advancements in Diagnostic Technologies: Global Healthcare Monitoring – 2024 (*ADT-2024*) scheduled on November 15-17, 2024, at the Department of Biotechnology, MNNIT Allahabad, India.
3. Organizing Secretary of *BioSangam-2024*, an international conference on Bio-Technological Intervention for Health, Agriculture and Circular Economy scheduled on February 23-25, 2024, at MNNIT Allahabad, Prayagraj- 211004, U.P., India.
4. Organized a workshop on “*In silico* drug discovery and drug designing: A practical approach” October 30-31, 2012, at Graphic Era University, Dehradun India.
5. Organized and participated in NanoBio Summit 2017 and served as a Judge for the poster session at Wind Creek Hotel & Casino, 303 Poarch Rd, Atmore, Alabama 36668, USA.
6. Organizing member of the 5th Annual Congress of the Indian Motility and Functional Disease Association (IMFDA) on 7-8 May 2022. I also chaired a session and judged the poster session.

f. Member of expert committee/ Judged the poster session

1. External expert for PhD thesis of Ms. Yasmeen Bhasin, roll number (2240941031) Metagenomic Analysis of the Endometrial Microbiome and Its Impact on Fertility Outcomes in Indian Women Undergoing Assisted Reproductive Techniques. At the Doctoral Research Centre of Chitkara School of Health Sciences, Chitkara University (CU), Punjab.
2. Served as an external expert for the evaluation of the Ph.D. work to promote JRF to SRF at CSIR- Indian Institute of Integrative Medicine (IIIM) Jammu, India.
3. Judged the poster session during student research week 2021 at the college of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX, USA
4. Judged the poster session during student research week 2020 at the College of Medicine, Texas Tech University Health Sciences Center, Lubbock, TX, USA
5. Judged the poster session at the NanoBio Summit 2017, organized by the University of South Alabama, USA.