CURRICULUM VITAE

Dr. Ajay Kumar
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[A]. Academic Qualification

S. No.	Degree	University	Year
1	B.Sc. Biotechnology	Bangalore University	2006
2	M.Sc. Life Sciences	Jawaharlal Nehru University	2009
3	Ph.D.	Banaras Hindu University	2013

[B]. Work experience (in chronological order)

S. No.	Position held	Name of the University	From	To
1	Associate Professor	Banaras Hindu University, Varanasi	Oct 4, 2024	Present
2	Assistant Professor (Level 10, 11)	Banaras Hindu University, Varanasi	Oct 3, 2015	Oct 3, 2024
3	Assistant Professor	Central University of Punjab, Bathinda	Jul 13, 2015	Oct 1, 2015
4	Postdoctoral Fellow	Jawaharlal Nehru university, New Delhi	Apr 15, 2015	Jul 10, 2015
5	Postdoctoral Fellow	Emory University, Atlanta, USA	March 5, 2014	March 6, 2015

[C]. Professional Recognition/Award/Prize/Certificate, Fellowship received

S. No.	Name of Award/Prize/Certificate	Awarding Agency	Year
1	Selection as a Faculty for Global Initiative of Academic Networks (GIAN)	Ministry of Human Resource Development, Government of India	2017
2	Received UGC-UPE Focus Area-II (Dev. Scheme 4204) subhead "Seed support for innovative project"	Interdisciplinary School of Life Sciences, BHU	2018
3	Early Career Research Award	Department of Science & Technology, New Delhi	2017
4	Dr. D.S. Kothari Postdoctoral Fellowship	University Grants Commission, New Delhi	2015
5	UGC-NRC Workshop on Cancer Biology	Indian Institute of Science, Bangalore	2013
6	ICMR-JRF	Indian Council of Medical Research, New Delhi	2013
7	Senior Research fellowship	Council for Scientific & Industrial Research (CSIR), New Delhi	2012
8	Junior Research fellowship	Council for Scientific & Industrial Research (CSIR), New Delhi	2010

9	GATE	Indian Institute of Technology	2009
10	Combined Biotechnology Entrance Examination	Jawaharlal Nehru University, New Delhi	2007
11	Qualified entrance examination for M.Sc. Life Science	Jawaharlal Nehru University, New Delhi	2007
12	Joint admission test (M.Sc.)	Indian Institute of Technology	2007

[D]. List of completed/ongoing projects as Principal Investigator/Co-PI
Ongoing: 4
Completed: 4

[E]. Publications (List of papers published in SCI Journals, in year wise descending order).
I. Research Articles

S. No.	Publication details	Impact Factor
1.	**Ajay Kumar**, Kant S, Singh SM. (2012) Novel molecular mechanisms of antitumor action of dichloroacetate against T cell lymphoma: Implication of altered glucose metabolism, pH homeostasis and cell survival regulation. **Chemico-biological Interactions.** 199, 29-37. **ISSN: 0009-2797** **DOI:** 10.1016/j.cbi.2012.06.005	**5.1**
2.	**Ajay Kumar**, Kant S, Singh SM. (2013) Antitumor and chemosensitizing action of Dichloroacetate implicates modulation of tumor microenvironment: a role of reorganized glucose metabolism, cell survival regulation and macrophage differentiation. **Toxicology and Applied Pharmacology.** 273, 196-208. **ISSN:** 0041-008X **DOI:** 10.1016/j.taap.2013.09.005	**3.8**
3.	**Ajay Kumar**, Kant S, Singh SM. (2013) Targeting monocarboxylate transporter by α-cyano-4-hydroxycinnamate modulates apoptosis and cisplatin resistance of Colo205 cells: implication of altered cell survival regulation. **Apoptosis**. 18, 1574-1585. **ISSN: 1573675X** **DOI:** 10.1007/s10495-013-0894-7	**7.2**
4.	**Ajay Kumar**, Kant S, Singh SM. (2013) α-cyano-4-hydroxycinnamate induces apoptosis in Dalton's lymphoma cells: Role of altered cell survival regulatory mechanisms. **Anticancer Drugs.** 24, 158-171. **ISSN:** 0959-4973 **DOI:** 10.1097/CAD.0b013e3283586743	**2.3**
5.	Kant S, **Ajay Kumar**, Singh SM. (2012) Fatty acid synthase inhibitor orlistat induces apoptosis in T cell lymphoma: role of cell survival regulatory molecules. **Biochimica et Biophysica Acta (BBA)-General Subjects.** 820, 1764-1773. **ISSN:** 0304-4165 **DOI:** 10.1016/j.bbagen.2012.07.010	**3**

6.	Vishvakarma NK, Kumar A, **Ajay Kumar**, Kant S, Bharti AC, singh SM (2012) Myelopotentiating effect of curcumin in tumor-bearing host: Role of bone marrow resident macrophages. **Toxicology and Applied Pharmacology.** 263, 111-121. **ISSN:** 0041-008X **DOI:** 10.1016/j.taap.2012.06.004	**3.8**
7.	Kant S, **Ajay Kumar,** Singh SM (2013) Tumor growth retardation and chemosensitizing action of fatty acid synthase inhibitor orlistat on T cell lymphoma: Implication of reconstituted tumor microenvironment and multidrug resistance phenotype. **Biochimica et Biophysica Acta (BBA)-General Subjects.** 1840, 294-302. **ISSN:** 0304-4165 **DOI:** 10.1016/j.bbagen.2013.09.020	**3**
8.	Kant S, **Ajay Kumar**, Singh SM. (2013) Myelopoietic efficacy of orlistat in murine hosts bearing T cell lymphoma: implication in macrophage differentiation and activation. **PLoS One.** 8, e82396. **ISSN:** 1932-6203 **DOI:** 10.1371/journal.pone.0082396	**3.7**
9	Kant S, **Ajay Kumar**, Singh SM. (2014) Bicarbonate transport inhibitor SITS modulates pH homeostasis triggering apoptosis of Dalton's lymphoma: implication of novel molecular mechanisms. **Molecular and Cellular Biochemistry.** 397, 167-178. **ISSN:** 0300-8177 **DOI:** 10.1007/s11010-014-2184-2	**4.3**
10.	Yun CC, **Ajay Kumar**. (2015) Diverse roles of LPA signaling in the intestinal epithelium. **Experimental Cell Research.** 333, 201-207. **ISSN:** 0014-4827 **DOI:** 10.1016/j.yexcr.2014.11.013	**3.7**
11.	No YR, Lee SJ, **Ajay Kumar**, Yun CC. (2015) HIF1α-Induced by Lysophosphatidic Acid Is Stabilized via Interaction with MIF and CSN5. **PLoS One.** 10:e0137513. **ISSN:** 1932-6203 **DOI:** 10.1371/journal.pone.0137513	**3.7**
12.	Yadav S, Pandey SK, Singh VK, Goel Y, **Ajay Kumar**, Singh SM. (2017) Molecular docking studies of 3-bromopyruvate and its derivatives to metabolic regulatory enzymes: Implication in designing of novel anticancer therapeutic strategies. **PLoS One.** 12:e0176403. **ISSN:** 1932-6203 **DOI:** 10.1371/journal.pone.0176403	**3.7**
13.	Yadav S, Pandey SK, **Ajay Kumar**, Kujur PK, Singh RP, Singh SM. (2017) Antitumor and chemosensitizing action of 3-bromopyruvate: Implication of deregulated metabolism. **Chemico-biological Interactions.** 270, 73-89. **ISSN:** 0009-2797	**5.1**

	DOI: 10.1016/j.cbi.2017.04.015	
14.	Yadav S, Kujur PK, Pandey SK, Goel Y, Maurya BN, Verma A, **Ajay Kumar**, Singh RP, Singh SM. (2018). Antitumor action of 3-bromopyruvate implicates reorganized tumor growth regulatory components of tumor milieu, cell cycle arrest and induction of mitochondria-dependent tumor cell death. **Toxicology and Applied Pharmacology**, 339, 52-64. **ISSN:** 0041-008X **DOI: 10.1016/j.taap.2017.12.004**	**3.8**
15.	Yadav S, Pandey SK, Goel Y, Kujur PK, **Ajay Kumar**, Singh RP, Singh SM. (2018) Protective and recuperative effects of 3-bromopyruvate on immunological, hepaticand renal homeostasis in a murine host bearing ascitic lymphoma: Implication of niche dependent differential roles of macrophages. **Biomedicine and pharmacotherapy**. 99, 970-985. **ISSN: 2381-1943** **DOI:** 10.1016/j.biopha.2018.01.149	**7.5**
16.	Gupta VK, Jaiswara P, **Ajay Kumar*** (2018) The Emerging Role of miRNAs in Tumor Acidosis. Journal of Cell Biology & Cell Metabolism 5: 015. (***Corresponding author**) **ISSN:** 0753-3322 **Link:** 10.24966/CBCM-1943/100015	
17.	Sonker P, **Ajay Kumar*** (2019) Tumor Metabolism: An Emerging TherapeuticTarget for Cancer Treatment. International Journal of Zoology and Animal Biology 2: 05. (***Corresponding author**) **ISSN: 2639-216X** **DOI:** 10.23880/izab-16000156	
18.	Gupta VK, Jaiswara PK, Sonker P, Rawat SG, Tiwari RK, **Ajay Kumar*** (2020) Lysophosphatidic acid promotes survival of T lymphoma cells by altering apoptosis and glucose metabolism. **Apoptosis**. 25(1-2):135-150. (***Corresponding author**) **ISSN:** 1360-8185 **DOI:** 10.1007/s10495-019-01585-1	**7.2**
19.	Soni VK, Shukla D, **Ajay Kumar**, Vishvakarma NK (2020). Curcumin circumvent lactate-induced chemoresistance in hepatic cancer cells through modulation of hydroxycarboxylic acid receptor-1. **The International Journal of Biochemistry & Cell Biology**. 123, 105752. **ISSN:** 1357-2725 **DOI:** 10.1016/j.biocel.2020.105752	**4**
20.	Priyadarshi K, Shirsath K, Waghela NB, Sharma A, **Ajay Kumar**, Pathak C (2021). Surface modified PAMAM dendrimers with gallic acid inhibit, cell proliferation, cell migration and inflammatory response to augment apoptotic cell death in human colon carcinoma cells. **Journal of Biomolecular Structure and Dynamics**. 39(18):6853-6869. **ISSN:** 0739-1102 **DOI:** 10.1080/07391102.2020.1802344	**4.4**

21.	Jaiswara PK, Gupta VK, Sonker P, Rawat SG, Tiwari RK, Pathak C, Kumar S, **Ajay Kumar* (2021)**. Nimbolide induces cell death in T lymphoma cells: Implication of altered apoptosis and glucose metabolism. **Environmental Toxicology**. 36, 628-641. (***Corresponding author**) **ISSN:** 1520-4081 **DOI:** 10.1002/tox.23067	**4.5**
22.	Al-Mujaini A, Maurya RP, Bosak S, Karan MK, Roy M, Singh VP, Singh MK, **Ajay Kumar**, Singh S. (**2021**) Clinicopathological Analysis and Demographic Features of Ocular Malignancies. **Clinical Ophthalmology.** 29;15:357-365. **ISSN: 1177-5483** **Link:** 10.2147/OPTH.S287087	
23.	Goel Y, Yadav S, Pandey SK, Temre MK, Singh VK, **Ajay Kumar**, Singh SM (**2021**) Methyl Jasmonate Cytotoxicity and Chemosensitization of T Cell Lymphoma *In Vitro* Is Facilitated by HK 2, HIF-1α, and Hsp70: Implication of Altered Regulation of Cell Survival, pH Homeostasis, Mitochondrial Functions. **Frontiers in Pharmacology**. 12:628329. **ISSN:** 1663-9812 **DOI:** 10.3389/fphar.2021.628329	**5.6**
24.	Goel Y, Yadav S, Pandey SK, Temre MK, Maurya BN, Verma A, **Ajay Kumar**, Singh SM (**2021**) Tumor Decelerating and Chemo-Potentiating Action of Methyl Jasmonate on a T Cell Lymphoma *In Vivo*: Role of Altered Regulation of Metabolism, Cell Survival, Drug Resistance, and Intratumoral Blood Flow. **Frontiers in Oncology**. 11:619351. **ISSN: *2234943X*** **DOI:** 10.3389/fonc.2021.619351	**4.7**
25.	Soni VK, Mehta A, Ratre YK, Chandra V, Shukla D, **Ajay Kumar**, Vishvakarma NK (**2021**) Counteracting Action of Curcumin on High Glucose-Induced Chemoresistance in Hepatic Carcinoma Cells. **Frontiers in Oncology.** 11:738961. **ISSN: *2234943X*** **DOI: 10.3389/fonc.2021.738961**	**4.7**
26.	Vaidya FU, Sufiyan Chhipa A, Mishra V, Gupta VK, Rawat SG, **Ajay Kumar**, Pathak C. Molecular and cellular paradigms of multidrug resistance in cancer. **Cancer Reports (Hoboken)**. 2022 Oct 13:e1291. **ISSN:** 2573-8348 **Link:** 10.1002/cnr2.1291	**1.7**
27.	Jaiswara PK, **Ajay Kumar*** (**2022**) Nimbolide retards T cell lymphoma progression by altering apoptosis, glucose metabolism, pH regulation, and ROS homeostasis. **Environmental Toxicology**. 37(6):1445-1457. (***Corresponding author**) **ISSN:** 1520-4081 **DOI:** 10.1002/tox.23497	**4.5**
28.	Verma A, Gupta P, Rai N, Tiwari RK, **Ajay Kumar**, Salvi P, Gautam V (**2022**) Assessment of biological activities of fungal endophytes derived bioactive compounds isolated from *Amoora rohituka*. **Journal of Fungi**. 8(3):285.	**4.7**

	ISSN: 2309-608X **DOI:** 10.3390/jof8030285	
29.	Rai N, Gupta P, Keshri PK, Verma A, Mishra P, Kumar D, **Ajay Kumar**, Singh SK, Gautam V (**2022**) Fungal Endophytes: an Accessible Source of Bioactive Compounds with Potential Anticancer Activity. **Applied *Biochemistry* and *Biotechnology***. 194(7):3296-3319. **ISSN:** 0273-2289 **DOI:** 10.1007/s12010-022-03872-1	**3.0**
30.	Gupta VK, **Ajay Kumar*** (**2022**) Targeting lysophosphatidic acid receptor with Ki16425 impedes T cell lymphoma progression through apoptosis induction, glycolysis inhibition, and activation of antitumor immune response. **Apoptosis**. 27(5-6):382-400. (***Corresponding author**) **ISSN:** 1360-8185 **DOI:** 10.1007/s10495-022-01723-2	**7.2**
31.	Singh M, Dwibedy SLL, Biswal S, **Ajay Kumar**, Srinivasan M, Kumar S (**2022**) Circular RNA: A novel and potential regulator in pathophysiology of schizophrenia. **Metabolic Brain Disease**. 37(5):1309-1316 **ISSN:** 0885-7490 **DOI:** 10.1007/s11011-022-00978-7	**3.6**
32.	Kumar Y, Singh NK, Singh VD, Ali I, Tiwari RK, **Ajay Kumar**, Pandey DS (2022) DNA/Protein binding and anticancer activity of Zn (II) complexes based on azo-Schiff base ligands. **Inorganica Chimica Acta**. 13:120963. **ISSN:** 0020-1693 **DOI:** 10.1016/j.ica.2022.120963	**2.8**
33.	Temre MK, Yadav S, Goel Y, Pandey SK, **Ajay Kumar**, Singh SM (**2022**) Glutor, a Glucose Transporter Inhibitor, Exerts Antineoplastic Action on Tumor Cells of Thymic Origin: Implication of Modulated Metabolism, Survival, Oxidative Stress, Mitochondrial Membrane Potential, pH Homeostasis, and Chemosensitivity. **Frontiers in Oncology.** 30;12:925666**.** **ISSN:** 2234943X **DOI:** 10.3389/fonc.2022.925666	**4.7**
34.	Rawat SG, Tiwari RK, Jaiswara PK, Gupta VK, Sonker P, Vishvakarma NK, Kumar S, Pathak C, Gautam V, **Ajay Kumar* (2022)** Phosphodiesterase 5 inhibitor sildenafil potentiates the antitumor activity of cisplatin by ROS-mediated apoptosis: a role of deregulated glucose metabolism. **Apoptosis.** 27(7-8):606-618. **ISSN:** 1360-8185 **DOI:** 10.1007/s10495-022-01741-0	**7.2**
35.	Temre MK, **Ajay Kumar, Singh** SM (**2022**) An appraisal of the current status of inhibition of glucose transporters as an emerging antineoplastic approach: Promising potential of new pan-GLUT inhibitors. **Frontiers in Pharmacology.** 1;13:1035510. **ISSN: 1663-9812**	**5.6**

	DOI: 10.3389/fphar.2022.1035510	
36.	Singh NK, Kumar Y, Paitandi RP, Tiwari RK, **Ajay Kumar**, Pandey DS (**2022**) DNA/protein binding and anticancer activity of ruthenium (II) arene complexes based on quinoline dipyrrin. **Inorganica Chimica Acta**. 545 (2023) 121241. **ISSN:** 0020-1693 **DOI:** 10.1016/j.ica.2022.121241	**2.8**
37.	Sagar P, Srivastava M, Tiwari RK, **Ajay Kumar**, Srivastava A, Pandey G, Srivastava SK (2022) *In-situ* One-Pot Novel Synthesis of Molybdenum di-Telluride@Carbon Nano-Dots for Sensitive and Selective Detection of Hydrogen Peroxide Molecules via Turn-off Fluorescence Mechanism. **Microchemical Journal** 183 (2022) 108134. **ISSN:** 0026-265X **DOI:** 10.1016/j.microc.2022.108134	4.8
38.	Temre MK, Devi B, Singh VK, Goel Y, Yadav S, Pandey SK, Kumar R, **Ajay Kumar**, Singh SM (2022) Molecular characterization of glutor-GLUT interaction and prediction of glutor's drug-likeness: implications for its utility as an antineoplastic agent. **Journal of Biomolecular Structure and Dynamics**. 26:1-12. **ISSN:** 0739-1102 **DOI:** 10.1080/07391102.2022.2161010	4.4
39.	Tiwari RK, Rawat SG, Gupta VK, Jaiswara PK, Sonker P, Kumar S, Gautam V, Mishra MK, **Ajay Kumar** (2023) Epinephrine facilitates the growth of T cell lymphoma by altering cell proliferation, apoptosis, and glucose metabolism. **Chemico-Biological Interactions**. 5(369)110278. **ISSN:** 0009-2797 **DOI:** 10.1016/j.cbi.2022.110278	5.1
40.	Pathak C, Vaidya FU, Waghela BN, Jaiswara PK, Gupta VK, **Ajay Kumar**, Rajendran BK, Ranjan K (2023) Insights of Endocytosis Signaling in Health and Disease. **International Journal of Molecular Sciences**. 24(3):2971 **ISSN:** 1422-0067 **DOI:** 10.3390/ijms24032971	5.6
41.	Dwibedy SLL, Singh M, Biswal SR, Muthuswamy S, **Ajay Kumar**, Kumar S (2023) Circular RNA and RNA binding proteins act together and regulate glioma. **Human Gene**. 35 (2023) 201156. **ISSN:** 2773-0441 **DOI:** 10.1016/j.humgen.2023.201156	0.7
42.	Mehta A, Ratre YK, Soni VK, Shukla D, Sonkar SC, **Ajay Kumar**, Vishvakarma NK (2023) Orchestral Role of Lipid Metabolic Reprogramming in T- Cell Malignancy. **Frontiers in Oncology**. 13:1122789	4.7

	ISSN: 2234943X **DOI:** 10.3389/fonc.2023.1122789	
43.	Rai N, Gupta P, Verma A, Tiwari RK, Madhukar P, Kamble SC, **Ajay Kumar**, Kumar R, Singh SK, Gautam V (2023) Ethyl Acetate Extract of *Colletotrichum gloeosporioides* Promotes Cytotoxicity and Apoptosis in Human Breast Cancer Cells. **ACS Omega**. 8(4):3768-3784. **ISSN:** 2470-1343 **DOI:** 10.1021/acsomega.2c05746	4.1
44.	Kumar K, Rawat SG, Manjit, Mishra M, Priya, **Ajay Kumar**, Chawla R (2023) Dual targeting pH responsive chitosan nanoparticles for enhanced active cellular internalization of gemcitabine in non-small cell lung cancer. **International Journal of Biological Macromololecules** 29;249:126057. **ISSN:** 1567-5769 **DOI:** 10.1016/j.ijbiomac.2023.126057	8.2
45.	Tiwari RK, Rawat SG, **Ajay Kumar*** (2023) The antagonist of β-adrenergic receptor propranolol inhibits T cell lymphoma growth and enhances antitumor efficacy of cisplatin in vivo: A role of modulated apoptosis, glucose metabolism, pH regulation, and antitumor immune response. **International Immunopharmacology** 124(Pt A):110825. **ISSN:** 1878-1705 **DOI:** 10.1016/j.intimp.2023.110825	5.6
46.	Rawat SG, Tiwari RK, **Ajay Kumar*** (2023) Blockade of phosphodiesterase 5 by sildenafil reduces tumor growth and potentiates tumor-killing ability of cisplatin in vivo against T cell lymphoma: Implication of modulated apoptosis, reactive oxygen species homeostasis, glucose metabolism, and pH regulation. **Environmental Toxicology**. 39(4):1909-1922. **ISSN:** 1520-4081 **DOI:** 10.1002/tox.24074	4.5
47.	Naqvi SMA, Islam SN, Kumar A, Patil CR, **Ajay Kumar***, Ahmad A* (2024) Enhanced anti-cancer potency of sustainably synthesized anisotropic silver nanoparticles as compared with L-asparaginase. **International Journal of Biological Macromolecules.** 263(Pt 1):130238. **ISSN**: 0141-8130 **DOI:** 10.1016/j.ijbiomac.2024.130238	8.2
48.	Gautam VS, Kumari P, Jaiswara PK, **Ajay Kumar**, Kharwar RN (2024) Antioxidant and cytotoxic activity of Rutin isolated from Nigrospora sphaerica, an Euphorbia hirta based endophytic fungus. **Process Biochemistry**. 142, 184-193	4.4

	ISSN: **1359-5113**	
49.	Kumar S, Vishvakarma NK*, **Ajay Kumar***. Editorial: Regulation of metabolic rewiring in T-cell malignancies. **Frontiers in Oncology.** 2024 Mar 18;14:1384469. (Editorial) **ISSN:** 2234943X	4.7
50.	Biswal SR, **Ajay Kumar**, Muthuswamy S, Kumar S. Genetic components of microdeletion syndromes and their role in determining schizophrenia traits. **Molecular Biology Reports** 2024 Jul 13;51(1):804. **ISSN:** 0301-4851	
51.	Verma A,Kumar K, Talukdar U, Pal G, Kumar D, Shukla P, Patel S, Kumar A, Ajay Kumar, Kharwar RN, Verma SK. Assessment of Bioactive Potential and Characterization of an Anticancer Compound from the Endophytic Fungi of *Ocimum sanctu.* **Microbiology**, 2024; 93, (4) 459–471. **ISSN:** 0026-2617	

***Corresponding author**

Total Citations of my Research Articles: 1024 (As per Google Scholar)

h-index: 18

i10-index: 30

II. Book Chapters

S. No.	Title	Author's Name	Publisher	Year
1.	The PI3K/Akt Signaling Pathway (Title of book: Concepts in cell signalling. Chapter 11.)	Sonker P, Kumar S, **Ajay Kumar***	Agri-biovet press, New Delhi, (ISBN 978-93-84502-47-2)	2017
2.	Toll-like Receptor Signaling (Title of book: Concepts in cell signalling. Chapter 12.)	**Ajay Kumar***	Agri-biovet press, New Delhi, (ISBN 978-93-84502-47-2)	2017
3.	Glycolysis (Title of book: carbohydrate metabolism: theory and practical approach. Chapter 2.)	Jaiswara P, **Ajay Kumar***	Nova Science Publishers, New York, NY (ISBN 978-1-53612-908-3	2017
4.	Diseases associated with carbohydrate metabolism (Title of book: carbohydrate Metabolism: theory and practical approach. Chapter 10.)	Sonker P, **Ajay Kumar***	Nova Science Publishers, New York, NY (ISBN 978-1-53612-908-3).	2017
5.	Phytochemicals in clinical studies: Current perspective (Title of book: Functional Food and Human Health. Chapter 21.)	Kumar S, Kumar D, Bhat A, **Ajay Kumar***	Springer India (Pvt.) Ltd., New Delhi, India	2018
6.	Bioactive lipids: their synthesis, biological functions and role in diseases (Title of book: Secondary metabolite and functional food components: Role in health and disease. Chapter 11)	Jaiswara P, Gupta VK, **Ajay Kumar***	Nova Science Publishers, New York, NY (ISBN 978-1-53613-186-4).	2018

7.	Bioactive peptides (Title of book: Secondary metabolite and functional food components: Role in health and disease. Chapter 12.)	Vasim M, Kumar S, **Ajay Kumar***	Nova Science Publishers, New York, NY (978-1-53613-186-4)	2018
8	Reprogramming of Tumor Associated Immune Cells by Phytochemicals: In Vitro Approaches for Cancer Treatment (Title of book: Phytochemistry: An in-silico and in-vitro Update. Chapter 4.)	Jaiswara PK, Gupta VK, Rawat SG, Sonker P, **Ajay Kumar***	Springer Nature (Pvt.) Ltd.	2019
9.	Adjunct Therapeutic Potential of Phytochemicals Against Cancer (Title of book: Phytochemicals as Lead Compounds for New Drug Discovery. Chapter 7.)	Gupta VK, Jaiswara PK, Sonker P, Rawat SG, **Ajay Kumar***	Elsevier (Pvt.) Ltd.	2019
10.	Targeting of Aerobic Glycolysis: An Emerging Therapeutic Approach Against Colon Cancer (Title of book: Colon Cancer Diagnosis and Therapy Vol2. Chapter 11.)	Jaiswara PK, Gupta VK, Rawat SG, Tiwari RK, Sonker P, Maurya RP, **Ajay Kumar***	Springer Nature (Pvt.) Ltd	2021
11.	Immune Response and Oxidative Stress in Obesity-Induced Cancer (Title of book: Obesity and Cancer. Chapter 6.)	Jaiswara PK, Sonker P, **Ajay Kumar***	Springer Nature (Pvt.) Ltd.	2021
12.	Resveratrol as anti-obesity and anticancer agent (Title of book: Obesity and cancer; Chapter 10.)	Gupta VK, Sonker P, **Ajay Kumar***	Springer Nature (Pvt.) Ltd	2021
13.	EGCG as Anti-Obesity and Anticancer Agent (Title of book: Obesity and Cancer. Chapter 11)	Rawat SG, Tiwari RK, Pratishtha Sonker, Maurya RP, Vishvakarma NK, and **Ajay Kumar***	Springer Nature (Pvt.) Ltd.	2021
14.	Role of Tumour-Associated Macrophages in Colon Cancer Progression and Its Therapeutic Targeting (Title of book: Colon Cancer Diagnosis and Therapy Vol. 3. Chapter 10)	Mehta A, Soni VK, Ratre YK, Amit A, Shukla D, **Ajay Kumar**, and Vishvakarma NK	Springer Nature (Pvt.) Ltd.	2022
15.	Clinical applications of noncoding RNAs in lung cancer patients (Title of Book: Clinical application of non-coding RNAs in cancer, Chapter 5)	Kumar S, Vishvakarma NK, and **Ajay Kumar***	Elsevier (Pvt.) Ltd.	2022
16.	Curcumin: a spice pigment against hepatic cancer (Title of book: Theranostics and precision medicine for the management of hepatocellular carcinoma Vol. 3. Chapter 10)	Soni VK, Ratre YK, Mehta A, Dixit AK, Dwivedi M, Shukla D,**Ajay Kumar**, and Vishvakarma NK	Elsevier (Pvt.) Ltd.	2022
17.	Tumor-associated macrophages in prostate cancer: role in progression and therapy (Title of Book: Immunological Implications and Molecular Diagnostics of Genitourinary Cancer. Chapter 11)	Mehta A, Rawat SG, Ratre YK, Soni VK, Shukla D, **Ajay Kumar**, Vishvakarma NK	Elsevier (Pvt.) Ltd.	2023

***Corresponding author**

[F]. Participation/Presentations in National/International Conferences/Symposia/Workshop

1. Presented a poster on "**Novel anticancer therapeutic strategy involving targeting of monocarboxylate transporters by α-cyano-4-hydroxycinnamate"** at the International conference on 39th Annual Conference of Indian Immunology Society organized by Department of Pathology, Institute of Medical Sciences, Banaras Hindu university, Varanasi, India, November 9-11, 2012.

2. Participated in the International Symposium on Integrative Physiology and Comparative Endocrinology (ISIPCE – 2016). Department of Zoology, Banaras Hindu University, Varanasi, from 12-14 February, 2016.

3. Delivered invited talk on "**Differential Regulation of Solid and Ascitic Tumor Progression: A role of Altered Myelopoiesis and Macrophage Functions**" at the International Seminar on "Role of Herbals in Cancer Prevention and Treatment" at School of Life Sciences, Jawaharlal Nehru University (JNU), New Delhi, India, 9-10 February, 2016.

4. Delivered invited talk on "**Targeting of Pyruvate Dehydrogenase Kinase: A novel Therapeutic Strategy for Cancer Treatment**" at the International Seminar on "Mitochondria in Health and Disease" organized by Society for Mitochondrial Research and Medicine-India at JNU, New Delhi, India, 10-11 February 2017.

5. Delivered invited talk on "**Targeting of glycolysis regulatory molecules for the development of novel cancer therapeutic strategies**" at the International Seminar on "Emerging Researches in Bioscience" organized by Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur, India from Oct. 28-30, 2018.

6. Delivered invited talk on "**Inhibition of monocarboxylate transporter induces tumor cell death and chemosensitization: implication of modulated tumor microenvironment**" at the International Seminar on "Tumor Microenvironment and Cancer Prevention and Therapeutics" at School of Life Sciences, Jawaharlal Nehru University (JNU), New Delhi, India, Feb.8-9, 2019.

7. Delivered invited talk on **'Vaccines: Now and Then'** for research scholars and students of PG program at the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya on 20/09/2021.

8. Delivered invited talk on "**Cell Division: Regulation and Defects**" for research scholars and students of PG program at the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya on 13/10/2021.

9. Delivered invited talk on **'Apoptotic Assay for Cultured Cells'** in National Workshop on Animal Cell Culture: Techniques and Applications organized by Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, February 16-22, 2022.

10. Participated as a **judge** for the poster presentation in the **48th Annual Conference of Indian Immunology Society on Infections, Vaccines & Immuno-Innovations for Human Health** organised by Department of Molecular and Human Genetics, BHU, Varanasi, India, from July 8-9, 2022.

11. Participated as a '**Resource Person**' in Kryashala Training Course Under Accelerate Vigyan Scheme on "**Hands-on Traning on Cell Culture and Live Cell Imaging**" (July 14 - 20, 2022) conducted by Nanotechnology Laboratory, Department of Zoology, BHU, Varanasi.

12. Chaired a session at the 5th International conference on Nutraceuticals and Chronic Diseases on "Pharmaceuticals and Nutraceuticals for Cancer and Other Chronic Diseases" organised by the Department of Zoology, University of Delhi, Delhi, India, from October 7-9, 2022.

13. Delivered an invited talk on "**Therapeutic potential of nimbolide against T cell lymphoma: a role of altered glucose metabolism, pH homeostasis, and oxidative stress**" at the 5th International Conference on Nutraceuticals and Chronic Diseases on "Pharmaceuticals and Nutraceuticals for Cancer and Other Chronic Diseases" organised by the Department of Zoology, University of Delhi, Delhi, India, from October 7-9, 2022.

14. Participated as a **Resource Person** and for **Invited Talk** entitled **'Molecular Diagnostics of Cancer'** in National Workshop on Molecular Diagnostics: Advances and Applications-2022 [November 3-9, 2022] organized by Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh.

15. Delivered invited talk on "**Flowcytometry: Scope and Applications"** for research scholars and students of PG program at the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya on 09/01/2023.

16. Delivered invited talk on "**Lysophosphatidic acid-mediated signaling: a novel therapeutic target for T cell lymphoma**" in the 45th All India Cell Biology Conference on "International Symposium on Biology of Development and Disease " at Department of Zoology, Banaras Hindu University, Varanasi, India, January 20-22, 2023.

17. Delivered invited talk on **"miRNA as Biomarkers"** for research scholars and students of PG program at the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya on February 13, 2023.

[G]. International/National conferences/meetings/talk organized (as Chairman, Organizing Committee, Convener, Organizing secretary) during last 5 years

1. One day workshop on '**Awareness and sensitization towards the use of animals in teaching and research as per CPCSEA and UGC guidelines'** on April 16, 2018, at the Department of Zoology, BHU, Varanasi-221005.

2. International conference on '**Role of Inflammation and Immune System for Cancer Prevention and Treatment'** at Institute of Science, Banaras Hindu University, Varanasi from February 13 to February 16, 2020.

3. Three days International Virtual Conference (**March 25 to March 27, 2022**) on '**Recent Trends in Animals Sciences**' at Department of Zoology, Institute of Science, Banaras Hindu University, Varanasi-221005.

[H]. Details of Radio/television talks/interviews/performance during last 5 years

- My talk on '**Vaccine and History behind its discovery**' is available on YouTube

[I]. Memberships of Professional Bodies/Societies

- Member, European Association of Cancer Research

- Life Member, Indian Society of Cell Biology
- Life member, Society for Nutraceuticals and Chronic Diseases
- Member, European Federation of Biotechnology
- Member, European Academy of Allergology and Clinical Immunology

[J]. Reviewer of International Journals

- Frontiers in Cellular and Infection Microbiology
- Frontiers in Oncology
- Frontiers in Immunology
- Frontiers in Microbiology and Virology
- Journal of Ovarian Research
- Metabolic Brain Disease
- Molecular Biology Reports
- Molecular and Cellular Biochemistry
- Journal of Biomolecular Structure and Dynamics
- Chemical Biology Letters
- Mediators of Inflammation (Hindawi)
- World Journal of Surgical Oncology
- International Journal of Zoological Research
- International Physiology Journal
- Journal of Sports and Exercise Medicine
- Microbiology and Immunology
- Cancer Investigation
- Cancers
- International Journal of Molecular Science
- Life Science
- Hematologica
- PLOS One
- International Immunopharmacology
- Metabolism
- Scientific Reports
- Communication Biology
- Cancer Cell International
- Cancer Investigation
- Gene
- Molecular genetics and Genomics
- PNAS India
- Apoptosis

[K]. Editor/Guest Editor of International Journals

- Frontiers in Oncology
- PLoS One

[L]. Personnel Trained

B.Sc. Students

1. Name: Sayma Azeem (B.Sc. Zoology)
   Name of University: Banaras Hindu University, Varanasi
   Title of Term Paper: 'A role of metabolism in regulation of Macrophages functions and its phenotypes'
   Year: 2016

2. Name: Nidhi Singh (B.Sc. Zoology)
Name of University: Banaras Hindu University, Varanasi
Title of Term Paper: 'Role of miRNA in regulation of nutrient transporters in cancer Cells'
Year: 2017

3. Name: Pushp Ranjan (B.Sc. Zoology)
Name of University: Banaras Hindu University, Varanasi
Title of Term Paper: 'The role of altered Treg cells in the pathogenesis of asthma'
Year: 2018

4. Name: Shrut Shriyansh (B.Sc. Biotechnology)
Name of University: Tilka Manjhi Bhagalpur University, Bhagalpur, Bihar
Title of Dissertation: 'Hands-on Training on Animal Cell Culture Techniques'
Year: 2018

5. Name: Arvind Kumar (B.Sc. Biotechnology)
Name of University: Mahatma Gandhi Central University, Motihari, Bihar
Title of Dissertation: 'Hands-on Training on Animal Cell Culture Techniques'
Year: 2018

6. Name: Mr. Shubham Kant (B.Sc. Biotechnology)
Name of University: Sharda University, Greater Noida (UP)
Title of Dissertation: Animal Cell Culture & Molecular Biology Techniques
Year: 2019

7. Name: Mr. Jayendra Singh (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: Cell Culture Methods, Laboratory Techniques and Equipments
Year: 2019

8. Name: Mangal Kumar Patel (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Fungal immunosuppressants'
Year: 2021

9. Name: Sakshi Parshuram Fulzele (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Immunosuppression by Bacteria'
Year: 2021

10. Name: Utkarsh Dubey (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Plants as immunosuppressive agents'
Year: 2021

11. Name: Abhishek kumar (M.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Role of Antimicrobial peptides in insect immunity'
Year: 2022

12. Name: Pooja Aggarwal (M.Sc. Zoology)
Name of University: Banaras Hindu University

Title of Dissertation: 'Anticancer activities of insect derived peptides'
Year: 2022

13. Name: Rishita Pandey (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Metabolism of innate immune cells in tumor microenvironment that benefits tumor progression'
Year: 2023

14. Name: Saurabh Yadav (B.Sc. Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Nature's Pharmacy Divine tree neem'
Year: 2023

15. Name: Swati Sinha (M.Sc. Biotechnology)
Name of University: Uttranchal University, Dehradun
Title of Dissertation: 'Basic animal cell culture and molecular biology techniques'
Year: 2023

16. Name: Madhu Kaushik (M.Sc. Biotechnology)
Name of University: Uttranchal University, Dehradun
Title of Dissertation: 'Basic animal cell culture and molecular biology techniques'
Year: 2023

17. Name: Ishika Jain (M.Sc Biotechnology)
Name of University: Banasthali University
Title of Dissertation: 'Identification of metabolic inhibitory potential of certain phytochemicals by in silico methods and hands-on training on related wet-lab techniques'
Year: 2023

18. Name: Priya pandey (M.Sc Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Molecular docking studies of Solenopsin to apoptosis, cell cycle regulation, invasion and metastasis, angiogenesis and glycolysis molecules'
Year: 2023

19. Name: Kajal (M.Sc Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'An in-silico approach to evaluate the therapeutic potential of insect derived peptides against idiopathic membranous nephropathy'
Year: 2023

20. Name: Simran Yadav (M.Sc Zoology)
Name of University: Banaras Hindu University
Title of Dissertation: 'Targeting Plasmepsin V and Lactate Dehydrogenase by molecular docking: A new approach for antimalarial drug discovery and various wet laboratory techniques'
Year: 2023

M.Sc. students

1. Name: Ms. Anamika Yadav (M.Sc. Biotechnology)
Name of University: Shri. A. N. Patel PG Institute of Science and Research, Anand, Gujarat
Title of Dissertation: 'Elucidating the tumor modulatory action of ethanol on Dalton's lymphoma'

Year: 2019

2. Name: Ms. Garima Negi (M.Sc. Biotechnology)
   Name of University: Shri. A. N. Patel PG Institute of Science and Research, Anand, Gujarat
   Title of Dissertation: 'Effect of Methanol on survival of Dalton's Lymphoma'
   Year: 2019

[M]. Research Guidance

(i) Ph.D. Students: 7

(ii) Completed: 4

Dr. Pradip Kumar Jaiswara (Current Position: Post-doctoral Fellow at Stenfenson Cancer Centre, Oklahoma University, USA)

Dr. Vishal Kumar Gupta (National Cancer Institute, NIH, USA)

Dr. Shiv Govind Rawat (MD Anderson Cancer Centre, Houston, Texas, USA)

Dr. Rajan Kumar Tiwari (The George Washington University, Washington, DC, USA)

(iii) Ongoing: 3

Mr. Abhishek Kumar

Mr. Mukesh Kumar

Mr. Siddharth Rai

Dr. Sanath (Co-supervisor)