

## Curriculum Vitae

**Pramod Kumar Gautam, Ph.D.**

**Associate Professor**

Room No 3040, 3<sup>rd</sup> Floor, Teaching block,

Department of Biochemistry

All India Institute of Medical Sciences

Ansari Nagar, New Delhi-110029

**Official Phone: (O) 011-26594682 (Ext) 4682**

**Email id:** [pramodgautam\\_13@yahoo.com](mailto:pramodgautam_13@yahoo.com), [gautam@aiims.edu](mailto:gautam@aiims.edu)

❖ <https://www.aiims.edu/en/2014-11-06-07-40-40/faculty/82-biochemistry/7257-dr-pramod-kumar-gautam.html>

❖ <https://orcid.org/0000-0001-7580-8846>

❖ <https://scholar.google.co.in/citations?user=PBcBKhwAAAAJ&hl=en>



### Educational Qualifications:-

| S. No. | Degree   | University/ Board                   | Thesis topic/ Subjects studied   |
|--------|----------|-------------------------------------|--|
| 1.     | Post Doc | BHU, Varanasi, U.P. India           | Studies on the effect of Hsp70- peptides complex conjugated with gold nanoparticles on immune cells progenitor (HSCs) during pathogenesis of acute myeloid leukemia. |
| 2.     | Ph.D.    | BHU, Varanasi, U.P. India           | Studies on the effect of effect of autologous Hsp70 on phenotype and cell surface markers on macrophages in tumor bearing mice.                                      |
| 3.     | M.Sc.    | V.B.S. PU. Jaunpur, U.P. India      | Biochemistry   |
| 4.     | B.Sc.    | D.D. U. GKP. University, U.P. India | Zoology, Botany, Chemistry   |

### Academic Career

| Position             | Department   | University/ Institution | Year                           |
|----------------------|--------------|-------------------------|--------------------------------|
| Additional Professor | Biochemistry | AIIMS, New Delhi        | 2023-----<br>Interview pending |
| Associate Professor  | Biochemistry | AIIMS, New Delhi        | 2020-2023                      |
| Assistant Professor  | Biochemistry | AIIMS, New Delhi        | 2016                           |
| DST Inspire Faculty  | Biochemistry | AIIMS, New Delhi        | 2016                           |

### Administrative Positions/Activities

| S.N. | Position | Department | University/ Institution | Year |
|------|----------|------------|-------------------------|------|
|------|----------|------------|-------------------------|------|

|    |   |                     |                  |          |
|----|---|---------------------|------------------|----------|
| 1  | Transport committee, AIIMS, New Delhi   | Administrative work | AIIMS, New Delhi | 2023     |
| 2  | Nodal officer COVID control   | Biochemistry        | AIIMS, New Delhi | 2020---- |
| 3  | Ph.D. course work in charge   | Biochemistry        | AIIMS, New Delhi | 2019---  |
| 4  | Assistant Store In charge   | Biochemistry        | AIIMS, New Delhi | 2016.... |
| 5. | Dept. Level Tissue Culture Facility In- charge and different Instrument In-charge | Biochemistry        | AIIMS, New Delhi | 2017---  |

### Academic Activity

|    |  |
|----|--|
|    | <b>Under Graduate ( MBBS)</b>                      |
| 1. | Classes  |
| 2. | Practical's  |
| 3. | PBL & Case Discussion                              |
|    |  |
|    | <b>Post Graduate ( MD, MSC, PhD)</b>               |
| 1  | Classes  |
| 2  | Practical's  |
| 3  | PBL & Case Discussion                              |
| 4  | Journal Clubs                                      |
| 5. | Seminars   |
| 6. | In-charge PhD Course work ( Dept. of Biochemistry) |

### Lecture/Workshops Organized

|    |   |
|----|---|
| 1. | Organized, Workshop (Central Instrument Facility), Part of Ph.D. coursework, 2019, 2021, 2022, 2023 |
| 2. | Organized, Workshop on Handling and Care of Laboratory in 2019                                      |
| 3. | Organized, Lecture on Ethics, Part of Ph.D. coursework, 2019, 2020. 2021                            |

### Membership of Society

|    |  |                           |
|----|--|---------------------------|
| 1  | Life member of the Indian Immunology Society, India            | 171/11/2011<br>IIS, India |
| 2  | Member of the International Society of Exercise and Immunology |                           |
| 3  | Life Member of Cancer Immunotherapy (CIMT), Germany            | G11                       |
| 4  | The Science Advisory Board                                     | 114639                    |
| 5. | Indian association of Cancer Research ( IACR)                  | LM/1237                   |
| 6. | Indian academy of Biomedical Sciences (IABS)                   | 362/22                    |
| 7. | Association of Clinical Biochemistry                           | 3990                      |

## Organization of National/International Conferences/Symposium/workshop

|    |   |
|----|---|
| 1. | Working on 2 days Bioinformatics workshop, Part of Ph.D. coursework |
|----|---|

### Training and workshops

| S. No. | Titles  | University/Institute   | Year | Type Of Item |
|--------|---|--|------|--------------|
| 1.     | Bioethics In Healthcare & Research                | AIIMS, New Delhi   | 2017 | Workshop     |
| 2.     | Research Methodology Course                       | AIIMS, New Delhi   | 2017 | Workshop     |
| 3.     | Microteaching                                     | AIIMS, New Delhi   | 2017 | Workshop     |
| 4.     | Basic Course In Medical And Health Professionals  | AIIMS, New Delhi   | 2018 | Workshop     |
| 5.     | Radiation Safety In Teaching And Research         | Banaras Hindu University, Varanasi & Atomic Energy Regulatory Board, Mumbai                                      | 2011 | Workshop     |
| 6.     | Writing Research Paper                            | Nasi, India at Banaras Hindu University, Varanasi  | 2011 | Workshop     |
| 7.     | Bioinformatics Tools Techniques And Applications  | DBT, New Delhi & Department Of Higher Education Government Of Uttar Pradesh At University Of Lucknow, U.P. India | 2012 | Workshop     |
| 8      | CSIR Sponsored Summer School And Training Program | CIMAP, Lucknow, U.P. India   | 2005 | Workshop     |

### Awards/Honors

| S. No. | Name of Award/Year                  | Awarding Agency                       |
|--------|-------------------------------------|---------------------------------------|
| 1.     | DST Inspire Faculty Award/2015      | DST, New Delhi                        |
| 2.     | UGC-Post-Doctoral Fellowship/2014   | UGC, New Delhi                        |
| 3.     | Best Poster Presentation Award/2011 | National institute of Immunology, New |

|    |   |                   |
|----|---|-------------------|
|    |   | Delhi             |
| 4. | UGC-JRF & SRF/ 2010                       | UGC, New Delhi    |
| 5  | CSIR-NET,2009 GATE, 2008 and ARS-NET-2009 | CSIR, ICAR, IISC, |

#### **Personnel Trained (Cancer research)**

Over 10, from 2016-onwards, including Graduate Students, Research Scholars, Research Assistants, Research Associates, Post-doctoral Fellows.

**M.Sc. Dissertation:** 10

**M.Phil. Degree awarded:** NA

**Ph.D. Degree awarded:** 0

**Post-Doctoral Fellows/RA:** 1

**MD Thesis Awarded:-** 1

PhD. Thesis:

**Current Research Group (2022):** 2 Ph.D. Students, 1 PDF/Research Associate, 1 JRF, 1 Project Assistant, 2 M.Sc. Trainees.

#### **List of Student registered as supervisor/ Co- supervisor/DC member**

**(Chief –supervisor)**

| <b>S. N o.</b> | <b>Title of the project</b>   | <b>Student Name</b>  | <b>Year</b> | <b>Degree</b> |
|----------------|---|--|-------------|---------------|
| 1              | Role of Macrophages phenotype in the regulation of mesenchymal stem cell migration and development in breast cancer   | Ms. Anita<br>Thesis writing permission granted               | 2018        | PhD           |
| 2              | Effect of bioconjugated chemotherapeutic molecules on stem cell, cancer stem cells and their associated microenvironment  | Mr. Khushwant Singh<br>( Thesis writing permission granted ) | 2018        | PhD           |
| 3              | To study the immunomodulatory effect of tumor derived exosomes on gamma delta cells   | Ms. Rupinder Kaur  | 2020        | PhD           |
| 4              | Comparative analysis between different stage Cancer patients to discover Novel Blood – based biomarkers for detection of early stage breast cancer- A pilot study | Dr. Marilyn Masih<br>(Completed)                             | 2020        | MD            |
| 5              | Detection of prostate cancer biomarker using sensitive and rapid lateral flow device with diagnostic and prognostic significance                                  | Dr. Sonam Agarwal  | 2020        | ICMR-RA       |

**(Co –supervisor/Dc member)**

| S. No. | Title of the project   | Student Name | Degree      | Year | Collaborating faculty/department/institution                               |
|--------|--|--------------|-------------|------|--|
| 1      | Role of hyperglycemia on macrophage effector function in pulmonary tuberculosis  |              | PhD Thesis: |      | Dr. Archana Singh<br>Department of Biochemistry<br>AIIMS, New Delhi-110029 |
| 2      | Influence of different grades of hyperglycemia on innate immune response in pathophysiology of active tuberculosis                   |              | PhD Thesis: |      | Dr. Archana Singh<br>Department of Biochemistry<br>AIIMS, New Delhi-110029 |
| 3      | To study the role of B cells on macrophage polarization and their effector functions in immunopathogenesis of pulmonary tuberculosis |              | MSc Thesis: |      | Dr. Archana Singh<br>Department of Biochemistry<br>AIIMS, New Delhi-110029 |
| 4      | Effect of benidipine alone and in combination with bosentan and sildenafil in monocrotaline induced pulmonary hypertension in rats   |              | MSc Thesis: |      | Dr. H. N. Yadav<br>Dept of Pharmacology,<br>AIIMS, New Delhi-110029        |
| 5      | Analysis of the role of few biomarkers in thyroid carcinoma  | Hema Yadav   | PhD thesis  | 2022 | Dr. Riyaz A Mir  |
| 6      |  |              |             |      |  |

**Alumni Student**

| S.N. | Name of the student                                     |  |
|------|---|--|
| 1    | Ms. Dristhi (M.Sc. dissertation trainee)                |  |
| 2    | Sakshi Mittal (M.Sc. dissertation trainee)              |  |
| 3    | Neha (B.Sc. dissertation trainee)                       |  |
| 4    | Mobashir Hamad (M.Sc. dissertation trainee)             |  |
| 5    | Jehangir Shah Syed bukhari (M.Sc. dissertation trainee) |  |
| 6    | Nidhi Pandey ((M.Sc. dissertation trainee)              |  |

### **Reviewer and Editorial Board Member for Peer-reviewed Journals**

1. Red flower publication (2016 onward)
2. Member of Editorial Board of IRA publication (2016 onward)
3. International journal of gastrointestinal cancer (2016 onward)
4. Journal of Nano particle research (2016 onward)
5. Journal of Leukemia Research (2016 onward)

### **Research Interests**

Key words:- Carcinogenesis, Cancer Chemoprevention, Cell Signaling, Cell Cycle, Cancer Stem Cells, stem cell regeneration

The areas of interest in carcinogenesis are cell cycle, mitogenic and cell survival signaling, and apoptosis, tumor angiogenesis, DNA damage/repair and organ specific carcinogenesis, including that of Breast cancer, Prostate cancer, and H&N cancer etc. Discovering and evaluating anticancer activities of small bio-molecules and plant extracts and providing scientific basis (mechanisms) for their effectiveness in regressing carcinogenesis. Of specific importance is the understanding of mechanisms at all levels viz., molecular, cellular and organ levels in both in vitro as well as in vivo animal model systems. The goal is to develop mechanism-based non-toxic anticancer agents for their potential use in cancer management by targeted drug delivery and early detection of cancer.

### **Research Contributions (selected)**

- Scientific contributions have been made in the area of cancer chemopreventive drug designing & discovery. Studies have led to the discovery of many novel mechanisms of action of chemopreventive agents against various cancers as evident from publications and citations. More importantly, the extensive work paved the way for a chemopreventive biopeptide Hsp70,  $\beta$ -defensin in human Breast cancer, Head & Neck cancer prostate cancer patients.
- We identified Hsp70 SBD domains containing tumor-associated antigen which boost anti-tumor function and immunomodulatory effect in macrophages and TAMs.
- We identified Hsp70 autologous treatment enhances the host survival rate as compare to control.

- We identified molecular markers in early and late-stage breast cancer patients which help to identify Stage 1 patients which is very rare. (Work is under process)
- We identified that these agents interfere with the process of angiogenesis to inhibit tumor vascularization and its growth and progression.
- We identified that WS and TC, a flavonoid, can sensitize cancer cells for chemotherapy. IP6 (inositol hexaphosphate) works selectively against prostate cancer cells.
- Recently we identified that M1 macrophage facilitates the tumor associated MSCs tumor promoting function into tumor-suppressing function.
- Recently we identified that tumor derived exosomes facilitate tumor progression and proteomic data shows they carry several miRNA.
- Recently we identified that several nanoparticles such as Au, Ag, Se, facilitate anti-tumor function as well as immunomodulation but it also affects normal function of control cells.

#### **Collaborations and Support: -**

##### **National Collaborations**

1. Prof. R. P. Singh, SLS, Jawaharlal Nehru University, New Delhi
2. Prof. B. Ram, Associate Professor, Department of Ayurveda, Institute of medical Sciences, Banaras Hindu University, India
3. Dr. Ashok Kumar, Scientist G, IGIB, New Delhi
4. Dr. Archana Singh, Associate Professor, Department of Biochemistry, AIIMS, New Delhi
5. Dr. Neeraj Kumar, Scientist D, Translational Health Science and Technology Institute, New Delhi.
6. Dr. Brijesh Kumar, Department of Pharmacology, Institute of medical Sciences, Banaras Hindu University, India.
7. Prof. P.K. Mishra. Department of Biochemical Engineering and Biotechnology, IIT Delhi.
8. Dr. Kashyap Debey, CBT, JNU, New Delhi
9. Dr. Ved Prakash Dwivedi ICGEB, New Delhi.
10. Dr. Sandeep Bhowal, Surgical oncology, IRCH, AIIMS, New Delhi
11. Dr. Suhani, Trauma Center, AIIMS, New Delhi
12. Dr. Riyaz. A Mir. AIIMS, New Delhi

##### **International Collaborations: -**

1. Dr. N. Singh. Biochemistry and Molecular Biology, Augusta University, USA

##### **Research Projects**

| S. No. | Title of Project  | Funding agency | Fund    | Tenure    | Chief Investigator/ Co-Investigator |
|--------|---|----------------|---------|-----------|-------------------------------------|
| 1      | Role of Macrophage in the regulation of Bone and Blood forming stem cell and progenitor cells migration and development | DST, New Delhi | 35 Lakh | 2017-2022 | Chief Investigator (Completed)      |

|     |   |  |         |            |                                |
|-----|---|--|---------|------------|--------------------------------|
| 2.  | Development of targeted drug delivery using liposomes/nanoparticles on cancer stem cell using herbal plant extract and hsp70- tumor antigen and to evaluate its anti-tumor function | SERB,DST, New Delhi                      | 49 Lakh | 2019-2022  | Chief Investigator (Completed) |
| 3.  | To emphasis the role of macrophage phenotype on mesenchymal stem cell in breast cancer  | IRG, AIIMS, New Delhi                    | 10 Lakh | 2020-2022) | Chief Investigator (Completed) |
| 4.  | To study the role of $\beta$ -defensin on stem cells, cancer stem cells remodelling and its associated microenvironments  | IRG, AIIMS, New Delhi                    | 10 Lakh | 2018-2020) | Chief Investigator (Completed) |
| 5.  | Development of single cell derived clonal spheroids as a tool for drug discovery in cancer research with focus on HNC   | SERB,HRHR, DST, New Delhi                | 5.93 Cr | 2018-2021  | CO- Investigator               |
| 6.  | Artificial Intelligence in oncology: Harnessing big data and advanced computing to provide personalized diagnosis and treatment for cancer patient                                  | MEITY, New Delhi                         | 2.8 Cr  | 2018-2022  | CO- Investigator               |
| 7.  | Evaluation of tumor-derived exosomes in blood during pre and post treatment of pancreatic cancer patients   | Inter-disciplinary IRG, AIIMS, New Delhi | 20 lakh | 2021-2023  | Chief Investigator             |
| 8.  | A pilot study evaluating role of Homoeopathic medicine in Cancer patients as adjuvant treatment to chemotherapy/radiotherapy, and correlating with Molecular Profiling              | DBT, GOI                                 | 1 Cr    | 2021-2024  | CO- Investigator               |
| 9.  | Immuno-epigenetics study of the humoral immune response in covid-19 patient from India,   | SERB-IRHPA, DST, New Delhi               | 80 Lakh | 2020-2023  | CO- Investigator               |
| 10. | Study of humoral immune response and its genetic correlates in infection free "resisters" among household contacts of adult pulmonary tuberculosis.                                 | Funding agency                           | 39 Lakh | 2022-2025  | CO- Investigator               |
| 11. | Role of M1 macrophage on DNA methylation and PI3K-AKT Signaling Pathway analysis in tumor-associated mesenchymal stem cells in Breast cancer  | IRG, AIIMS, New Delhi                    | 10 Lakh | 2022-2024) | Chief Investigator             |



### **List of Invited Talks/ Chairing of Scientific Sessions**

1. Invited talk (Oral talk) on “A whole exosome sequencing-based approach to identify miRNA in prognostic and diagnostic applications in Pancreatic Ductal Adenocarcinoma” at 49th ACBICON held at Thiruvananthapuram, Kerala, India. (14-16 Sept. 2023)
2. Invited talk on “The diverse role of HSP70 in immunomodulation and anti-tumor potential in cancer” at NIMHANS, Bangalore, held at Kerala, India. (3-5 March, 2023)
3. Invited for chair the session and poster judge in “Mitochondria, Cell Death, and Human Diseases” organized by SLS, JNU, New Delhi. (18-19 Feb 2023).
4. Invited and presented a poster on “Treat-after-too: Strategies for the early stage screening and targeted drug delivery for cancer” at 45th All India Cell Biology Conference & International Symposium on Biology of Development and Disease organized and held at Banaras Hindu University, Varanasi, India. (20-23 Jan 2023).
5. Invited talk on “Trend of blood-based biomarkers for early detection of breast cancer” at 16th Cancer symposium on translational chemoprevention brainstorming organized by SLS, JNU, New Delhi. (18-19 Nov 2022).
6. Invited for chair a session in ICAN 2021 organized by AICERA. (online) (7-8 Sep 2022).
7. Invited talk on “Targeted drug delivery using nanomaterials bioconjugates” at ICOR organized by Lumimind (online) (7-8 Sep 2022).
8. Invited for Jury for “YSC 2020- Current Pandemic & Future Crisis” organized in Science India Fest.
9. Participated in RESMO organized by Dept. of Medical Oncology, AIIMS, New Delhi held on 14th-15th Feb 2020.
10. Invited Talk on “Herbal Plant Extract Based Synthesized Metal Nanoparticle Enhances Anti-Tumor potential” at 140th conference on Global Congress & Expo on Biomaterial at Kuala Lumpur, Malaysia, organized by Scientific Federation. (May 13-14, 2019).
11. Participated in 45<sup>th</sup> Annual meeting of Indian Immunological Society on Immunotherapy and Advances in Immunology organized by THSTI, Faridabad. (1-3 Oct 2018).

### **List of Publication**

1. Khushwant Singh, Pramod Kumar Gautam. Emulating the Role of Neutrophils in Head and Neck Cancer Microenvironment: Prognostic Role and Therapeutic Strategies J Cancer Immunol. 2023;5(2):61-73.
2. Anita Chauhan, Sonam Agarwal, Marilyn Masih, Pramod Kumar Gautam. The Multifunction Role of Tumor-Associated Mesenchymal Stem Cells and Their Interaction with Immune Cells in Breast Cancer. Immunol Invest. 2023;24;1-23.
3. Sonam Agarwal, Anita Chauhan, Pramod Kumar Gautam Immunomodulatory effects of  $\beta$ -defensin 2 on tumor associated macrophages induced antitumor function in breast cancer. Advances in Cancer Biology - Metastasis 7 (2023) 100102
4. Sonam Agarwal, Anita Chauhan, Khushwant Singh, Kunal Kumar, Rupinder Kaur, Marilyn Masih and Pramod Kumar Gautam. Immunomodulatory effects of  $\beta$ -defensin 2 on macrophages induced immuno-upregulation and their antitumor function in breast cancer. BMC Immunology. 2022; 23-53.
5. Marilyn Masih, Sonam Agarwal, Rupinder Kaur, Pramod Kumar Gautam. Role of chemokines in breast cancer. Cytokine. 2022;155:155909.
6. Sanjay Kumar, Minshu Prashan, B. Ram, K. N. Dwivedi, Pramod Kumar Gautam. Role of Katankateryadi Kwatha in Insulin Secretion and Restoration of Biochemical Changes in

Streptozotocin-Nicotinamide Induced Diabetes Mellitus Type 2 in Rats. *Int J Appl Biol Pharm* 2021; 12 (3): 362-379.

7. R K Singh, S Kumar, M S Tomar, P K Verma, S P Singh, P K Gautam, A Acharya. Classical Protein Kinase C: a novel kinase target in breast cancer. *Clin Transl Oncol.* 2019;21(3):259-267.
8. Rishi Kant S, Sanjay K, Munendra Singh T, Praveen Kumar V, Surya Pratap S, Pramod KG and Arbind A. Spatial Regulation of PKC by Pharmacological Approaches in Cancer: Are We There Yet? *Biotechnol Ind J.* 2018;14(2):162.
9. Rishi Kant S, Sanjay K, Munendra Singh T, Praveen Kumar V, Surya Pratap S, Pramod KG and Arbind A, PKC $\alpha$ : regulation and implication for cellular transformation. *MOJ Tumor Res.* 2018; 1(2):44-47.
10. Munendra Singh Tomar, Sanjay Kumar, Sanjay Kumar, Pramod Kumar Gautam, Rishi Kant Singh, Praveen Kumar Verma, Surya Pratap Singh & Arbind Acharya (2017). NK Cell Effector Functions Regulation by Modulating nTreg Cell Population During Progressive Growth of Dalton's Lymphoma in Mice. *Journal Immunological Investigations.* 2017; 47: 40-56.
11. Pramod Kumar Gautam, Sanjay Kumar, M.S. Tomar, Rishi Kant Singh, A. Acharya, Sanjay Kumar, B. Ram. (2017). Selenium nanoparticles induce suppressed function of tumor associated macrophages and inhibit Dalton's lymphoma proliferation. *Biochem Biophys Rep.* 2017.21;12:172-184.
12. Rishi Kant Singh, Sanjay Kumar, Pramod Kumar Gautam, Munendra Singh Tomar Praveen Kumar Verma, Surya Pratap Singh, Sanjay kumar & Arbind Acharya. (2017). Protein kinase C- $\alpha$  and the regulation of diverse cell responses. *Biomolecular Concepts.* doi.org/10.1515/bmc-2017-0005.
13. Rishi Kant Singh, Sanjay Kumar, Pramod Kumar Gautam, Munendra Singh Tomar Praveen Kumar Verma, Surya Pratap Singh, Sanjay kumar & Arbind Acharya. (2017). Protein kinase C- $\alpha$  and the regulation of diverse cell responses. *Biomol Concepts* 2017 Sep 26;8(3-4):143-153.
14. Pramod Kumar Gautam, Sanjay Kumar, Tomar MS, Rishi Kant Singh, Acharya A, Ritis Shyanti K, Anita, Sonal Swaroop, Sanjay Kumar and B Ram. Biologically Synthesized Gold Nanoparticles using Ocimum sanctum (Tulsi Leaf Extract) Induced Anti-Tumor Response in a T Cell Daltons Lymphoma. *J Cell Sci Ther.* 2017; 8:6.1-12.
15. Munendra Singh Tomar, Sanjay Kumar, Pramod Kumar Gautam, Sanjay Kumar, Rishi Kant Singh, Praveen Kumar Verma, Surya Pratap Singh, Amit Kumar and Arbind Acharya. NK cell as a Novel Tool to Regulate and Inhibit the Progressive Growth of Tumor after Chemotherapy. *Canc Therapy & Oncol Int J.* 2017;8(1):1-3.
16. Sanjay Kumar, Pramod Kumar Gautam, Munendra Singh Tomar & Arbind Acharya. CD28-mediated T cell response is upregulated by exogenous application of autologous Hsp70-peptide complex in a tumor-bearing host. *Immunol Res* (2016) 64:313–323.
17. Praveen kumar verma, pramod kumar gautam, sanjay kumar, m. S. Tomar, rishi kant singh, s. P. Singh, a. Acharya. tumor progression decreased life span of male mice as compare to female mice. *Int. J. Adv. Res.eng. Applied sciences* 2016.5(10) 30-45
18. Pramod K. Gautam & Arbind Acharya. (2015) suppressed expression of cd80 (b7.1) and cd86 (b7.2) receptors in tams up-regulated by autologous hsp70-peptide complex in dalton's lymphoma bearing balb/c mice. *IJRST* 5(III):106-127.
19. Pramod K. Gautam & Arbind Acharya.(2015) Antigenic Hsp70-peptide upregulate altered suppressed expression of docking receptor ICAM-1 in TAMs increases in Dalton's lymphoma bearing mice. *IJRST* 5(III):86-105.

20. Pramod Kumar Gautam & Arbind Acharya. (2015). Antigenic Hsp70-peptide upregulate altered cell surface MHC class I expression in TAMs and increases anti- tumor function in Dalton's lymphoma bearing mice. *Tumor Biol.* 36:2023–2032.
21. Pramod Kumar Gautam, Sanjay Kumar, Arbind Acharya. (2015) Non-mammalian Animals as Experimental Models for Modern Scientific Research. *IJAREAS*. 2015; 4(9):67-76.
22. Kumar S, Gautam PK, Acharya A. (2015). Aqueous extract of *Withania somnifera* (ashwagandha) root an indigenous medicinal plant enhances antigen specific cell- mediated immune response (CMIR) in a T cell lymphoma. *IJAREAS*. 4(8), 12-28.
23. Pramod K. Gautam & Arbind Acharya. (2014) Suppressed expression of homotypic multinucleation, extracellular domains of CD172 $\alpha$  (SIRP- $\alpha$ ) and CD47 (IAP) receptor in TAMs up-regulated by Hsp70-peptide complex in Dalton's lymphoma. *Scan.J.Immunol.* 2014;80;22-35.
24. Gautam PK, Deepak P, Kumar S, Acharya A. Morphological effects of autologous hsp70 on peritoneal macrophages in a murine T cell lymphoma. *Tumor Biology*. 2013; 34:3407–3415.
25. Kumar S, Deepak P, Kumar S, Gautam PK, Acharya A. (2013) A benzophenanthridine alkaloid, chelerythrine induces apoptosis in vitro in a Dalton's Lymphoma. *J Cancer Res Ther.* 2013;9(4):693-700.
26. Gautam PK, Maurya BN, Kumar S, Deepak P, Kumar S Jr, Tomar MS, Acharya A. (2013). Progressive growth of a murine T cell lymphoma alters population kinetics and cell viability of macrophages in a tumor-bearing host. *Tumor Biol*. 34:827–836.
27. Gautam PK, Deepak P, Kumar S, Acharya A. Role of macrophage in tumor microenvironment: prospect in cancer immunotherapy. *Euro. J. Inflammation*. 2013;10(1): 1-14.

#### **List of Abstract Poster/workshop: -**

1. Gautam PK, Kumar S, Deepak P and Acharya A. Progressive growth of Dalton's lymphoma induces early increase in polarized type II phagocytic cell population at the tumor microenvironment. 6th Biyani's International Conference-2011 (BICON-11) on Innovations in the Latest Healthcare Issues, Sept 19-20, 2011, Biyani Girls College, Jaipur, India.
2. Pramod K. Gautam, Sanjay Kumar, Babu N. Maurya, Arbind Acharya. Heat shock protein-70 induced morphological changes in murine peritoneal macrophages in a T cell lymphoma. International Symposium on Cancer Biology, Nov 14-16, 2011, National Institute of Immunology, New Delhi, India.
3. Sanjay Kumar, Praveen Deepak, Sanjay Kumar, Pramod K. Gautam, Babu N. Maurya, Arbind Acharya And Raj Kumar Prajapati. Protein kinase C inhibitor chelerythrine induces tumor cell apoptosis and growth delay of Dalton's lymphoma in vivo. International Conference on Cancer Prevention, Diagnosis & Treatment, January 21-22, 2012, Center of Advanced Studies, Department of Zoology, University of Rajasthan, Jaipur, India.
4. Sanjay Kumar Jr, Praveen Deepak, Sanjay Kumar, Pramod K. Gautam, Babu N. Maurya, , Arbind Acharya And Raj Kumar Prajapati. Inhibition of Protein kinase C induces apoptosis of tumor cell in a mice bearing T cell lymphoma. International Symposium on Recent Advances in Cancer Research: Therapeutics to Chemoprevention, Feb 8-9, 2012, School of Life Sciences, Central University of Gujrat, Gandhinagar, India.
5. Deepak P, Kumar S, Kumar S, Jr, Gautam PK, Acharya A. Different Exercise paradigms induced Hsp70 enhances cell mediated immunity in a T cell lymphoma murine model. Brain Storming Meeting on Advances in Neuroendocrinology, Feb 14-15, 2011, Department of Zoology, BHU, Varanasi, India.

6. Babu N. Maurya, Sanjay Kumar, Pramod K. Gautam, Arbind Acharya. Progressive growth of Dalton's lymphoma modulates nitric oxide production in murine peritoneal macrophages. National Conference on Frontiers in Biological Sciences, Dec 4-5, 2011, V.B.S. Purvanchal University, Jaunpur, Uttar Pradesh, India.
7. Pramod K. Gautam, Praveen Deepak, Sanjay Kumar, Sanjay Kumar Jr, Babu N. Maurya, Raj K. Prajapati, Arbind Acharya. Anti-sera pre-coating enhances adherence of myeloid-derived suppressor cells (MDSC) of monocytic lineage. 22nd All India Congress of Zoology and National Seminar on "Recent Advances in Biological Sciences: Biodiversity and Human Welfare" (NSBHW) Dec 29-31, 2011 at Department of Zoology, University of Lucknow, India.
8. Deepak, Sanjay Sanjay jr Kumar, Praveen Kumar, Pramod K. Gautam, Arbind Acharya. Interleukin-13 enhances CD4+ T helper 2 cell polarization in hyper immunized BALB/c mice. 5th congress of the federation of the immunological societies of asia oceania. March 14-17, Hotel Le Meridien, New Delhi, India.
9. Sanjay Kumar Jr, Praveen Deepak, Sanjay Kumar, Pramod K. Gautam, Babu N. Maurya, Arbind Acharya And Raj Kumar Prajapati. A Benzophenanthridine Alkaloid, Chelerythrine Induced Apoptosis through Bax and BCL-Xs Dependent Mechanism in Murine T cell Lymphoma. 5th congress of the federation of the immunological societies of asia oceania. March 14-17, Hotel Le Meridien, New Delhi, India.(Abstract).
10. Pramod K. Gautam, Praveen Deepak, Sanjay Kumar, A, Acharya. HSP-70 induced multinucleation on murine peritoneal Macrophages in T cell lymphoma. 39th annual conference of Indian immunological society. Nov, 9- 11, Varanasi, 2012.
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