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### Area of Specialization

Prolyl hydroxylase-2 and fatty acid synthase regulation in Hypoxia

Bioactive lipids mediated regulation of hypoxia inducible factor-1 $\alpha$  (HIF-1 $\alpha$ )

### Research Projects

S. No.	Title of Projects	Funding Agency & Role	Duration	Total grant	Current Status
1.	Development and Standardization of USD and ECG gel.	Merck Inc, Sainik Nagar, Lucknow	1 Month	Rs. 20,000/-	Completed
2.	A comprehensive strategy to study the transcriptional activity of HIF-1 through on C terminal transactivation and N- terminal transactivation domain.	DHR & Mentor	2 Years	Rs.19,97,600/-	On-going
3.	Prolylhydroxylase2(PHD2) mediated stabilization of HIF-1 $\alpha$ to regulate glycolysis and fatty acid synthesis in mammary gland chemoprevention.	SERB & PI	4 Years	Rs.46,61,000/-	Completed
4.	Extraction, Purification and Formulation of $\omega$ -3 PUFAs Dosage Form Derived from Plant Sources as a Health Supplement: A Replacement Strategy for Marine Based PUFAs.	MOFPI & PI	3 Years	Rs.60,35,200/-	On-going
5.	Formulation of $\omega$ -3 PUFAs Dosage Form Derived from Plant Sources as a Health Supplement: A Replacement Strategy for Marine Based PUFAs.	DST & PI	3 Years	Rs.70,09,990/-	Ist Release Awaited
6.	Effect of $\alpha$ -Linolenic acid and $\gamma$ -Linolenic acid on Breast Cancer Risk: Evaluation of Synergistic Efficacy with an Anticancer Drug.	SERB & PI	4 Years	Rs.46,14,000/-	Completed

7. Effect of Eicosapentanoic acid (EPA) and Docosahexanoic acid (DHA) on Intestinal Mucosal Barrier Function against Methotrexate Induced Toxicity in Albino Rats.	UGC & PI	2 Years	Rs.6,00,000/-	Completed
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## Patents

### **Award:**

1. Nikilesh Kumar, Ram Naresh Bhargava, **Gaurav Kaithwas**. Disinfecting and cleansing composition of *L. usitattissimum* Fixed oil. **Patent Award No. 346841**.
2. **Gaurav Kaithwas**, Daksh Bhatia. *Perilla Frutescens* Fixed oil: Efficacy against Bovine Mastitis. **Patent AwardNo. 360859**

### **Under Evaluation:**

1. Rajnish K Yadav, **Gaurav Kaithwas**. Alpha linolenic acid based Nanosuspension for treatment of bovine Mastitis. **(Filed on 13.8.2019)**

## Research Publications

Google Citation: - 2237, H-index: - 25, Scopus Citation: - 1483, H-index: -21  
(Cumulative Impact Factor: - 333) (Average Impact Factor:- 4.37)

88. Rani S, Roy S, Singh M, **Kaithwas G\***. Regulation of Transactivation at C-TAD Domain of HIF-1 $\alpha$  by Factor-Inhibiting HIF-1 $\alpha$  (FIH-1): A Potential Target for Therapeutic Intervention in Cancer. *Oxidative Medicine and Cellular Longevity*. 2022 May 10;2022. **(IF-7.310)**
87. Singh L, Roy S, Kumar A, Rastogi S, Kumar D, Ansari MN, Saeedan AS, Singh M, **Kaithwas G\***. Repurposing Combination Therapy of Voacamine With Vincristine for Downregulation of Hypoxia-Inducible Factor-1 $\alpha$ /Fatty Acid Synthase Co-axis and Prolyl Hydroxylase-2 Activation in ER+ Mammary Neoplasia. *Frontiers in cell and developmental biology*. 2021;9. **(IF-6.081)**
86. Singh L, Singh M, Rastogi S, Choudhary A, Kumar D, Raj R, Ansari MN, Saeedan AS, **Kaithwas G\***. Effect of Voacamine upon inhibition of hypoxia induced fatty acid synthesis in a rat model of methyl-nitrosourea induced mammary gland carcinoma. *BMC Molecular and Cell Biology*. 2021 Dec;22(1):1-7. **(IF-2.813)**
85. Alosaimi W, Kumar R, Alharbi A, Alyami H, Agrawal A, **Kaithwas G**, Singh S, Khan RA. Computational technique for effectiveness of treatments used in curing SARS-CoV-2. *Intelligent Automation and Soft Computing*. 2021:617-38. **(IF-3.401)**
84. Singh L, Bajaj S, Gadewar M, Verma N, Ansari MN, Saeedan AS, **Kaithwas G\***, Singh M. Modulation of host immune response is an alternative strategy to combat SARS-CoV-2 pathogenesis. *Frontiers in Immunology*. 2021;12. **(IF- 8.786)**
83. Chowdhary P, Sammi SR, Pandey R, **Kaithwas G**, Raj A, Singh J, Bharagava RN. Bacterial degradation of distillery wastewater pollutants and their metabolites characterization and its toxicity evaluation by using *Caenorhabditis elegans* as terrestrial test models. *Chemosphere*. 2020 Dec 1; 261:127689. **(IF-8.943)**

82. Singh L, Aldosary S, Saeedan AS, Ansari MN, **Kaithwas G\***. Prolyl hydroxylase 2: a promising target to inhibit hypoxia-induced cellular metabolism in cancer cells. *Drug discovery today*. 2018 Nov 1;23(11):1873-82. **(IF-8.369)**
81. Roy S, Singh M, Sammi SR, Pandey R, **Kaithwas G\***. ALA-mediated biphasic downregulation of  $\alpha$ -7nAchR/HIF-1 $\alpha$  along with mitochondrial stress modulation strategy in mammary gland chemoprevention. *Journal of Cellular Physiology*. 2019 Apr;234(4):4015-29. **(IF-6.513)**
80. Rawat JK, Roy S, Singh M, Guatam S, Yadav RK, Ansari MN, Aldossary SA, Saeedan AS, **Kaithwas G\***. Transcutaneous Vagus Nerve Stimulation Regulates the Cholinergic Anti-inflammatory Pathway to Counteract 1, 2-Dimethylhydrazine Induced Colon Carcinogenesis in Albino wistar Rats. *Frontiers in pharmacology*. 2019 May 21;10:353. **(IF-5.988)**
79. Gautam S, Rawat AK, Sammi SR, Roy S, Singh M, Devi U, Yadav RK, Singh L, Rawat JK, Ansari MN, Saeedan AS, **Kaithwas G\***. DuCLOX-2/5 inhibition attenuates inflammatory response and induces mitochondrial apoptosis for mammary gland chemoprevention. *Frontiers in pharmacology*. 2018 Apr 6; 9:314. **(IF-5.988)**
78. Roy S, Singh M, Rawat A, Devi U, Gautam S, Yadav RK, Rawat JK, Ansari MN, Saeedan AS, Kumar D, **Kaithwas G\***. GLA supplementation regulates PHD2 mediated hypoxia and mitochondrial apoptosis in DMBA induced mammary gland carcinoma. *The international journal of biochemistry & cell biology*. 2018 Mar 1; 96:51-62. **(IF-5.085)**
77. Yadav RK, Tripathi CB, Saraf SA, Ansari MN, Saeedan AS, Aldosary S, Rajinikanth PS, **Kaithwas G\***. Alpha-linolenic acid based nano-suspension protect against lipopolysaccharides induced mastitis by inhibiting NF $\kappa$ Bp65, HIF-1 $\alpha$ , and mitochondria-mediated apoptotic pathway in albino Wistar rats. *Toxicology and applied pharmacology*. 2019 Aug 15; 377:114628. **(IF-4.64)**
76. Yadav RK, Singh M, Roy S, Gautam S, Rawat JK, Singh L, Ansari MN, Saeedan AS, **Kaithwas G\***. Evaluation of  $\alpha$ -linolenic acid-based intramammary nanosuspension for treatment of subclinical mastitis. *Journal of Dairy Science*. 2020 Mar 1;103(3):2701-6. **(IF-4.225)**
75. Devi U, Singh M, Roy S, Gupta PS, Ansari MN, Saeedan AS, **Kaithwas G\***. Activation of prolyl hydroxylase-2 for stabilization of mitochondrial stress along with simultaneous downregulation of HIF-1 $\alpha$ /FASN in ER+ breast cancer subtype. *Cell Biochemistry and Function*. 2019 Jun;37(4):216-27. **(IF-3.964)**
74. Pal AK, Nandave M, **Kaithwas G**. Chemoprophylactic activity of nitazoxanide in experimental model of mammary gland carcinoma in rats. *3 Biotech*. 2020 Aug;10(8):1-2. **(IF-2.893)**
73. Tripathi CB, Parashar P, Arya M, Singh M, Kanoujia J, **Kaithwas G**, Saraf SA. Biotin anchored nanostructured lipid carriers for targeted delivery of doxorubicin in management of mammary gland carcinoma through regulation of apoptotic modulator. *Journal of Liposome Research*. 2020 Jan 2;30(1):21-36. **(IF-5.586)**
72. Arya P, **Kaithwas G\***. Combined therapy of gabapentin with pantoprazole exhibited better protective action against forestomach and pylorus ligation-induced gastric esophageal reflux disease in albino Wistar rats. *Human & Experimental Toxicology*. 2020 Apr;39(4):492-9. **(IF-3.247)**
71. Roy S, Singh M, Rawat A, Kumar D, **Kaithwas G\***. Mitochondrial apoptosis and curtailment of hypoxia-inducible factor1 $\alpha$ /fatty acid synthase: A dual edge perspective of gamma linolenic acid in ER+ mammary gland cancer. *Cell Biochemistry and Function*. 2020 Mar 23. **(IF-3.963)**

70. Singh M, Kasna S, Roy S, Aldosary S, Saeedan AS, Ansari MN, **Kaithwas G\***. Repurposing mechanistic insight of PDE-5 inhibitor in cancer chemoprevention through mitochondrial-oxidative stress intervention and blockade of DuCLOX signalling. *BMC cancer*. 2019 Dec;19(1):1-5. **(IF-4.638)**
69. Arya M, Singh P, Tripathi CB, Parashar P, Singh M, Kanoujia J, Guleria A, **Kaithwas G**, Gupta KP, Saraf SA. Pectin-encrusted gold nanocomposites containing phytic acid and jacalin: 1, 2-dimethylhydrazine-induced colon carcinogenesis in Wistar rats, PI3K/Akt, COX-2, and serum metabolomics as potential targets. *Drug delivery and translational research*. 2019 Feb 15;9(1):53-65. **(IF-5.671)**
68. Parashar P, Tripathi CB, Arya M, Kanoujia J, Singh M, Yadav A, **Kaithwas G**, Saraf SA. A synergistic approach for management of lung carcinoma through folic acid functionalized co-therapy of capsaicin and gefitinib nanoparticles: Enhanced apoptosis and metalloproteinase-9 down-regulation. *Phytomedicine*. 2019 Feb 1;53:107-23. **(IF-6.656)**
67. Anand A, Arya M, **Kaithwas G**, Singh G, Saraf SA. Sucrose stearate as a biosurfactant for development of rivastigmine containing nanostructured lipid carriers and assessment of its activity against dementia in *C. elegans* model. *Journal of Drug Delivery Science and Technology*. 2019 Feb 1;49:219-26. **(IF-5.062)**
66. Devi U, Singh M, Roy S, Tripathi AC, Gupta PS, Saraf SK, Ansari MN, Saeedan AS, **Kaithwas G\***. PHD-2 activation: a novel strategy to control HIF-1 $\alpha$  and mitochondrial stress to modulate mammary gland pathophysiology in ER+ subtype. *Naunyn-Schmiedeberg's archives of pharmacology*. 2019 Oct 1;392(10):1239-56. **(IF-3.0)**
65. Yadav RK, Rawat JK, Gautam S, Singh M, Kumar M, Ansari MN, Roy S, Saeedan AS, **Kaithwas G\***. Antidiabetic activity of mefloquine via GLP-1 receptor modulation against STZ-NA-induced diabetes in albino wistar rats. *3 Biotech*. 2018 May 1;8(5):240. **(IF-2.893)**
64. Saeedan AS, Singh I, Ansari MN, Singh M, Rawat JK, Devi U, Gautam S, Yadav RK, **Kaithwas G\***. Effect of early natal supplementation of paracetamol on attenuation of exotoxin/endotoxin induced pyrexia and precipitation of autistic like features in albino rats. *Inflammopharmacology*. 2018 Aug 1;26(4):951-61. **(IF-5.093)**
63. Al-Saeedan AS, Gautam V, Ansari MN, Singh M, Yadav RK, Rawat JK, Devi U, Gautam S, Roy S, **Kaithwas G**. Revisiting the systemic lipopolysaccharide mediated neuroinflammation: Appraising the effect of L-cysteine mediated hydrogen sulphide on it. *Saudi pharmaceutical journal*. 2018 May 1;26(4):520-7. **(IF-4.562)**
62. Gautam S, Rani S, Aldossary SA, Saeedan AS, Ansari MN, **Kaithwas G\***. Effects of phenidone (Duclox-2/5 inhibitor) against N-methyl-N-nitrosourea induced mammary gland carcinoma in albino rats. *Toxicology and Applied Pharmacology*. 2018 Jul 15;351:57-63. **(IF-4.460)**
61. Tripathi CB, Parashar P, Arya M, Singh M, Kanoujia J, **Kaithwas G**, Saraf SA. QbD-based development of  $\alpha$ -linolenic acid potentiated nanoemulsion for targeted delivery of doxorubicin in DMBA-induced mammary gland carcinoma: in vitro and in vivo evaluation. *Drug delivery and translational research*. 2018 Oct 1;8(5):1313-34. **(IF-5.671)**
60. Singh M, Devi U, Roy S, Gupta PS, **Kaithwas G\***. Chemical activation of prolyl hydroxylase-2 by BBAP-1 down regulates hypoxia inducible factor-1 $\alpha$  and fatty acid synthase for mammary gland chemoprevention. *RSC advances*. 2018;8(23):12848-60. **(IF-4.036)**
59. Rani V, Gautam S, Rawat JK, Singh M, Devi U, Yadav RK, Roy S, **Kaithwas G\***. Effects of minocycline and doxycycline against terbutaline induced early postnatal

- autistic changes in albino rats. *Physiology & behavior*. 2018 Jan 1;183:49-56. **(IF-3.474)**
58. Sammi SR, Rawat JK, Raghav N, Kumar A, Roy S, Singh M, Gautam S, Yadav RK, Devi U, Pandey R, **Kaithwas G\***. Galantamine attenuates N, N-dimethyl hydrazine induced neoplastic colon damage by inhibiting acetylcholinesterase and bimodal regulation of nicotinic cholinergic neurotransmission. *European journal of pharmacology*. 2018 Jan 5;818:174-83. **(IF-5.195)**
57. Gautam S, Singh P, Singh M, Roy S, Rawat JK, Yadav RK, Devi U, Gupta PS, Saraf SA, **Kaithwas G\***. Rifaximin, a pregnane X receptor (PXR) activator regulates apoptosis in a murine model of breast cancer. *RSC advances*. 2018;8(7):3512-21. **(IF-4.036)**
56. Kumar V, **Kaithwas G**, Anwar F, Rahman M, Patel DK, Singh Y, Verma A. Effect of Variable Doses of *Paederia foetida* L. Combat Against Experimentally-Induced Systemic and Topical Inflammation in Wistar Rats. *Current Bioactive Compounds*. 2018 Mar 1;14(1):70-9.
55. Yadav S, Tiwari V, Singh M, Yadav RK, Roy S, Devi U, Gautam S, Rawat JK, Ansari MN, Saeedan AS, Prakash A, **Kaithwas G\***. Comparative efficacy of alpha-linolenic acid and gamma-linolenic acid to attenuate valproic acid-induced autism-like features. *Journal of physiology and biochemistry*. 2017 May 1;73(2):187-98. **(IF-5.080)**
54. Singh N, Parashar P, Tripathi CB, Kanoujia J, **Kaithwas G**, Saraf SA. Oral delivery of allopurinol niosomes in treatment of gout in animal model. *Journal of liposome research*. 2017 Apr 3;27(2):130-8. **(IF-5.586)**
53. Arya M, Tiwari P, Tripathi CB, Parashar P, Singh M, Sinha P, Yadav NP, **Kaithwas G**, Gupta KP, Saraf SA. Colloidal vesicular system of Inositol hexaphosphate to counteract DMBA induced dysregulation of markers pertaining to cellular proliferation/differentiation and inflammation of epidermal layer in mouse model. *Molecular pharmaceutics*. 2017 Mar 6;14(3):928-39. **(IF-5.364)**
52. Yadav RK, Singh M, Roy S, Ansari MN, Saeedan AS, **Kaithwas G\***. Modulation of oxidative stress response by flaxseed oil: Role of lipid peroxidation and underlying mechanisms. *Prostaglandins & other lipid mediators*. 2018 Mar 1;135:21-6. **(IF-3.813)**
51. Verma A, Ahmed B, Anwar F, Rahman M, Patel DK, **Kaithwas G**, Rani R, Bhatt PC, Kumar V. Novel glycoside from *Wedelia calendulacea* inhibits diethyl nitrosamine-induced renal cancer via downregulating the COX-2 and PEG 2 through nuclear factor- $\kappa$ B pathway. *Inflammopharmacology*. 2017 Feb 1;25(1):159-75. **(IF-5.093)**
50. Gautam S, Roy S, Ansari MN, Saeedan AS, Saraf SA, **Kaithwas G\***. DuCLOX-2/5 inhibition: a promising target for cancer chemoprevention. *Breast Cancer*. 2017 Mar;24(2):180-90. **(IF-2.922)**
49. Roy S, Rawat AK, Sammi SR, Devi U, Singh M, Gautam S, Yadav RK, Rawat JK, Singh L, Ansari MN, Saeedan AS, **Kaithwas G\***. Alpha-linolenic acid stabilizes HIF-1  $\alpha$  and downregulates FASN to promote mitochondrial apoptosis for mammary gland chemoprevention. *Oncotarget*. 2017 Sep 19;8(41):70049. **(IF-4.345)**
48. Kumar V, Bhatt PC, Rahman M, **Kaithwas G**, Choudhry H, Al-Abbasi FA, Anwar F, Verma A. Fabrication, optimization, and characterization of umbelliferone  $\beta$ -D-galactopyranoside-loaded PLGA nanoparticles in treatment of hepatocellular carcinoma: in vitro and in vivo studies. *International journal of nanomedicine*. 2017; 12:6747. **(IF-7.033)**
47. Ahmed D, Khan MI, **Kaithwas G**, Roy S, Gautam S, Singh M, Devi U, Yadav R, Rawat J, Saraf S. Molecular docking Analysis and Antidiabetic activity of Rifabutin against

- STZ-NA induced diabetes in albino wistar rats. Beni-Suef University journal of basic and applied sciences. 2017 Sep 1;6(3):269-84.
46. Anand A, Arya M, Singh G, **Kaithwas G**, A Saraf S. Design and development of resveratrol NLCs and their role in synaptic transmission of acetylcholine in *C. elegans* model. *Current Drug Therapy*. 2017 Aug 1;12(2):134-48.
  45. Kumar A, Gautam S, Rawat JK, Singh M, Saraf SA, **Kaithwas G\***. Effect of palonosetron (5HT-3 antagonist) and pantoprazole (proton pump inhibitor) against surgical esophagitis induced by forestomach and pylorus ligation in albino rats. *Human & experimental toxicology*. 2016 Jan;35(1):41-50. **(IF-3.247)**
  44. Verma A, Bhatt PC, **Kaithwas G**, Sethi N, Rashid M, Singh Y, Rahman M, Al-Abbasi F, Anwar F, Kumar V\*. Chemomodulatory effect *Melastoma Malabathricum* Linn against chemically induced renal carcinogenesis rats via attenuation of inflammation, oxidative stress, and early markers of tumor expansion. *Inflammopharmacology*. 2016 Oct 1;24(5):233-51. **(IF-5.039)**
  43. Devi U, Kumar V, Gupta PS, Dubey S, Singh M, Gautam S, Rawat JK, Roy S, Yadav RK, Ansari MN, Saeedan AS, **Kaithwas G\***. Experimental Models for Autism Spectrum Disorder Follow-Up for the Validity. *Review Journal of Autism and Developmental Disorders*. 2016 Dec 1;3(4):358-76. **(IF-4.345)**
  42. **Kaithwas G\***. PS 16-29 GLP-1 Receptor Agonistic and Antidiabetic Activity of Mefloquine Against Stz-Na Induced Diabetes In Albino Wistar Rats. *Journal of Hypertension*. 2016 Sep 1;34:e472. **(IF-4.171)**
  41. Mishra RK, Sammi SR, Rawat JK, Roy S, Singh M, Gautam S, Yadav RK, Devi U, Ansari MN, Saeedan AS, Saraf SA, **kaithwas G\***. Palonosetron attenuates 1, 2-dimethyl hydrazine induced preneoplastic colon damage through downregulating acetylcholinesterase expression and up-regulating synaptic acetylcholine concentration. *RSC advances*. 2016;6(46):40527-38. **(IF-4.036)**.
  40. Singh M, Devi U, Roy S, Gupta PS, Saraf SA, **Kaithwas G\***. Prolyl hydroxylase mediated inhibition of fatty acid synthase to combat tumor growth in mammary gland carcinoma. *Breast Cancer*. 2016 Nov 1;23(6):820-9. **(IF-7.519)**
  39. Tiwari V, Singh M, Rawat JK, Devi U, Yadav RK, Roy S, Gautam S, Saraf SA, Kumar V, Ansari N, Saeedan AS, **Kaithwas G\***. Redefining the role of peripheral LPS as a neuroinflammatory agent and evaluating the role of hydrogen sulphide through metformin intervention. *Inflammopharmacology*. 2016 Oct 1;24(5):253-64. **(IF-5.093)**
  38. Rani A, Roy S, Singh M, Devi U, Yadav RK, Gautam S, Rawat JK, Ansari MN, Saeedan AS, Prakash A, **Kaithwas G\***.  $\alpha$ -Chymotrypsin regulates free fatty acids and UCHL-1 to ameliorate N-methyl nitrosourea induced mammary gland carcinoma in albino wistar rats. *BMC complementary and alternative medicine*. 2016 Oct 1;24(5):277-86. **(IF-4.782)**
  37. Manral C, Roy S, Singh M, Gautam S, Yadav RK, Rawat JK, Devi U, Ansari MN, Saeedan AS, **Kaithwas G\***. Effect of  $\beta$ -sitosterol against methyl nitrosourea-induced mammary gland carcinoma in albino rats. *BMC complementary and alternative medicine*. 2016 Dec;16(1):1-0. **(IF-4.782)**
  36. Kumar V, Bhatt PC, Sharma K, Rahman M, Patel DK, Sethi N, Kumar A, Sachan NK, **Kaithwas G**, Al-abbasi FA, Anwar F. *Melastoma malabathricum* Linn attenuates complete Freund's adjuvant-induced chronic inflammation in Wistar rats via inflammation response. *BMC complementary and alternative medicine*. 2016 Dec 1;16(1):510. **(IF-4.78)**
  35. Kumar V, Bhatt PC, **Kaithwas G**, Rashid M, Al-Abbasi FA, Khan JA, Anwar F, Verma A.  $\alpha$ -Mangostin mediated pharmacological modulation of hepatic carbohydrate

- metabolism in diabetes induced Wistar rat. Beni-Suef University Journal of Basic and Applied Sciences. 2016 Sep 1;5(3):255-76.
34. Gautam R, Singh M, Gautam S, Rawat JK, Saraf SA, **Kaithwas G\***. Rutin attenuates intestinal toxicity induced by Methotrexate linked with anti-oxidative and anti-inflammatory effects. BMC complementary and alternative medicine. 2016 Dec 1;16(1):99. **(IF-2.833)**
  33. Dubey S, Saha S, **Kaithwas G**, Saraf SA\*. Effect of standardized fruit extract of *Luffa cylindrica* on oxidative stress markers in hydrogen peroxide induced cataract. Indian journal of pharmacology. 2015 Nov;47(6):644. **(IF-2.833)**
  32. Haider M, Kanoujia J, Tripathi CB, Arya M, **Kaithwas G**, Saraf SA. Pioglitazone loaded vesicular carriers for anti-diabetic activity: development and optimization as per central composite design. Journal of Pharmaceutical Sciences and Pharmacology. 2015 Mar 1;2(1):11-20.
  31. Rawat D, Tripathi CB, Parashar P, Singh M, **Kaithwas G**, Saraf SA. Development and characterization of nanostructured lipid carriers of *Vetiveria zizanoides* oil for therapeutic potential in prickly heat treatment. Journal of pharmaceutical sciences and pharmacology. 2015 Jun 1;2(2):162-71.
  30. Gupta SK, Gautam S, Rawat JK, Singh M, Saraf SA, **Kaithwas G\***. Efficacy of variable dosage of aspirin in combating methotrexate-induced intestinal toxicity. RSC advances. 2015;5(13):9354-60. **(IF-4.036)**
  29. Chauhan S, Devi U, Kumar VR, Kumar V, Anwar F, **Kaithwas G\***. Dual inhibition of arachidonic acid pathway by mulberry leaf extract. Inflammopharmacology. 2015 Feb 1;23(1):65-70. **(IF-5.093)**
  28. Giri AK, Rawat JK, Singh M, Gautam S, **Kaithwas G\***. Effect of lycopene against gastroesophageal reflux disease in experimental animals. BMC Complementary and Alternative Medicine. 2015 Dec 1;15(1):110. **(IF-4.782)**
  27. Sharma N, Gautam S, Devi U, Singh M, Rawat JK, Sethi N, Saraf SA, **Kaithwas G\***. Preclinical appraisal of terbutaline analogues in precipitation of autism spectrum disorder. RSC Advances. 2015 Apr 28;5(49):39003-11. **(IF-4.036)**
  26. Saxena G, Bharagava RN, **Kaithwas G**, Raj A. Microbial indicators, pathogens and methods for their monitoring in water environment. Journal of water and health. 2015 Jun;13(2):319-39. **(IF-2.246)**
  25. Sahu RK\*, Singh B, Saraf SA, **Kaithwas G**, Kishor K. Photochemical toxicity of drugs intended for ocular use. Archives of Industrial Hygiene and Toxicology. 2014 Jun 1;65(2):157-67. **(IF-2.078)**
  24. Dubey S, Gautam S, **Kaithwas G\***. Comment on " Disruption of social approach by MK-801, amphetamine & fluoxetine in adolescent C57BL/6J mice"--by S. Moy et al. Neurotoxicology and teratology. 2014;41:96.
  23. Kumar S, Singh M, Rawat JK, Gautam S, Saraf SA, **Kaithwas G\***. Effect of rutin against gastric esophageal reflux in experimental animals. Toxicology Mechanisms and Methods. 2014 Dec 1;24(9):666-71. **(IF-4.019)**
  22. Raj P, Singh M, Rawat JK, Gautam S, Saraf SA, **Kaithwas G\***. Effect of enteral administration of  $\alpha$ -linolenic acid and linoleic acid against methotrexate induced intestinal toxicity in albino rats. RSC advances. 2014;4(104):60397-403. **(IF-4.036)**
  21. Khinchi P, Saha S, Saraf SA, **Kaithwas G\***. Combination therapy of gamma-aminobutyric acid derivative promotes proton pump inhibitor based healing of reflux esophagitis in animal model. Pharmacological Reports. 2014 Jan 1;66(1):165-8. **(IF-3.919)**

20. Anand R, **Kaithwas G\***. Anti-inflammatory potential of alpha-linolenic acid mediated through selective COX inhibition: computational and experimental data. *Inflammation*. 2014 Aug 1;37(4):1297-306. **(IF-6.987)**
19. Shukla K, Raj P, Kumar A, Kumar M, **Kaithwas G\***. Effect of monotherapy and combination therapy of pantoprazole and aprepitant in gastric esophageal reflux disease in albino rats. *The Scientific World Journal*. 2014 Oct;2014.
18. **Kaithwas G**, Singh P, Bhatia D\*. Evaluation of in vitro and in vivo antioxidant potential of polysaccharides from Aloe vera (*Aloe barbadensis* Miller) gel. *Drug and chemical toxicology*. 2014 Apr 1;37(2):135-43. **(IF-2.597)**
17. Arya E, Saha S, Saraf SA, **Kaithwas G\***. Effect of *Perilla frutescens* fixed oil on experimental esophagitis in albino Wistar rats. *BioMed research international*. 2013 Jan 1;2013. **(IF3.426)**
16. Singh P\*, Kumari K, **Kaithwas G**, Mehrotra GK. Efficient one-pot four-component synthesis of fused thiazolopyridin-2-ones in ionic liquid. *Journal of Chemical Sciences*. 2013 Nov 1;125(6):1471-80. **(IF-2.15)**
15. Lodhi RL, Maity S, Kumar P, Saraf SA, **Kaithwas G**, Saha S\*. Evaluation of mechanism of hepatotoxicity of leflunomide using albino wistar rats. *African journal of pharmacy and pharmacology*. 2013 Jun 29;7(24):1625-31.
14. **Kaithwas G**, Majumdar DK. Effect of *Linum usitatissimum* (flaxseed/linseed) fixed oil against distinct phases of inflammation. *International Scholarly Research Notices*. 2013;Feb 17;2013:73 51-58.
13. **Kaithwas G**, Majumdar DK\*. In vitro antioxidant and in vivo antidiabetic, antihyperlipidemic activity of linseed oil against streptozotocin-induced toxicity in albino rats. *European Journal of Lipid Science and Technology*. 2012 Nov;114(11):1237-45. **(IF-3.196)**
12. Sharma A\*, **Kaithwas G**, Vijayakumar M, Unnikrishnan MK, Rao CV. Antihyperglycemic and antioxidant potential of polysaccharide fraction from portulaca oleracea seeds against streptozotocin-induced diabetes in rats. *Journal of Food Biochemistry*. 2012 Jun;36(3):378-82. **(IF-3.564)**
11. **Kaithwas G\***, Gautam R, Jachak SM, Saklani A. Antiarthritic effects of *Ajuga bracteosa* Wall ex Benth. in acute and chronic models of arthritis in albino rats. *Asian Pacific Journal of Tropical Biomedicine*. 2012 Mar 1;2(3):185-8. **(IF-1.517)**
10. Lodhi RL, Saraf SA, **Kaithwas G**, Saha S. Pharmacology and toxicology of leflunomide. *Iranian Journal of Pharmacology and Therapeutics*. 2012 Oct 10;11(1):26-0.
9. **Kaithwas G**, Mukherjee A, Chaurasia AK, Majumdar DK\*. Antiinflammatory, analgesic and antipyretic activities of *Linum usitatissimum* L.(flaxseed/linseed) fixed oil. *Indian Journal of Experimental Biology*. 2011; 11:932-938. **(IF-0.94)**
8. **Kaithwas G\***, Dubey K, Pillai KK. Effect of aloe vera (*Aloe barbadensis* Miller) gel on doxorubicin-induced myocardial oxidative stress and calcium overload in albino rats. *Indian Journal of Experimental Biology*. 2011; 49:260-268. **(IF-0.94)**
7. **Kaithwas G**, Mukerjee A, Kumar P, Majumdar DK\*. *Linum usitatissimum* (linseed/flaxseed) fixed oil: antimicrobial activity and efficacy in bovine mastitis. *Inflammopharmacology*. 2011 Feb 1;19(1):45-52. **(IF-5.093)**
6. **Kaithwas G**, Majumdar DK\*. Evaluation of antiulcer and antisecretory potential of *Linum usitatissimum* fixed oil and possible mechanism of action. *Inflammopharmacology*. 2010 Jun 1;18(3):137-45. **(IF-5.093)**
5. **Kaithwas G**, Majumdar DK\*. Therapeutic effect of *Linum usitatissimum* (flaxseed/linseed) fixed oil on acute and chronic arthritic models in albino rats. *Inflammopharmacology*. 2010 Jun 1;18(3):127-36. **(IF-5.093)**



4. **Kaithwas G\***, Sharma SD, Majumdar DK. Abattoir-sourced Isolated Ileum from Gallus gallus domesticus as an Experimental Tool. Alternatives to Laboratory Animals. 2010;38(5):361-6. **(IF-2.438)**
3. **Kaithwas G\***, Kumar A, Pandey H, Acharya AK, Singh M, Bhatia D, Mukerjee A. Investigation of comparative antimicrobial activity of Aloe vera gel and juice. Pharmacologyonline. 2008;1:239-43.
2. Bhatia D, Gupta MK, Gupta A, Singh M, **Kaithwas G**. Pharmacognostical studies on seeds of *Centratherum anthelminticum* Kuntze.
1. **Kaithwas G\***, Dubey K, Bhatia D, Sharma AD, Pillai K. Reversal of sodium nitrite induced impairment of spontaneous alteration by Aloe vera gel: involvement of cholinergic system. Pharmacologyonline. 2007;3:428-37.

### **Publications and other than journal articles (Books, chapters in books)**

1. Books/Monographs: 02 (International)
2. Chapters: 06 (03- International) (03- National)

### **Conferences, Seminars and Invited lectures**

#### ***Invited Lectures:-***

1. **Title of Lecture:** Comparative Efficacy of Alpha-Linolenic Acid and Gamma-Linolenic Acid to Promote Mitochondrial Apoptosis for Mammary Gland Chemoprevention.  
**Title of Conference:** 8<sup>th</sup> International Translational Cancer Research Conference on "Inflammation and Immune System for Cancer Prevention and Treatment".  
**Organized by:** Department of Biochemistry, Institute of Science, Banaras Hindu University, India, during 13-16 February 2020.
2. **Title of Lecture:** Alpha-linolenic acid stabilizes HIF-1  $\alpha$  and downregulates FASN to promote mitochondrial apoptosis for mammary gland chemoprevention.  
**Title of Conference:** 13<sup>th</sup> International Symposium on "Cancer Prevention and Treatment".  
**Organized by:** Department of Cancer Biology, School of Life Sciences, Jawaharlal Nehru University (JNU), New Delhi-110067, India during 20-21 February 2020.
3. **Title of Lecture:** Effect of plant lipids based nanosuspension on preclinical and clinical mastitis.  
**Title of Conference:** Faculty Development Programme on "Herbal Nano-Pharmacology" 2019  
**Organized by:** KIET Group of Institutions, Ghaziabad, GBT University.
4. **Title of Lecture:** Introduction to Patents and Their Applications.  
**Title of Conference:** National Pharmacy Week  
**Organized by:** Department of Pharmaceutical Sciences, Faculty of Health Sciences, Sam Higginbottom University of Agriculture, Technology & Sciences, Allahabad
5. **Title of Lecture:** Terbutaline siblings and autistic spectrum disorder: Toxicity Revisited  
**Title of Conference:** International Pharmaceutical Conference-2015, Nanoformulations and Translational Research: Small Getting Bigger  
**Organized by:** Department of Pharm Sc, BBA University

6. **Title of Lecture:** Modulating Prolyl Hydroxylase Activity to Alter Fatty Acid Synthase Expression in Tumor Hypoxia  
**Title of Conference:** 6th NIPER (RBL)-CSIR-CDRI Symposium on “Current Scenario in Drug Discover & Development”  
**Organized by:** Central Drug Research Institute, Lucknow.
7. **Title of Lecture:** Revisiting the role of paracetamol and exotoxin/endotoxin combination in precipitation of autistic like features in infant albino rats.  
**Title of Conference:** 7th NIPER (RBL)-CSIR-CDRI Symposium on “Current Scenario in Drug Discover & Development”  
**Organized by:** Central Drug Research Institute, Lucknow, India.
8. **Title of Lecture:** Art of Publishing Myths and Facts  
**Title of Conference:** Importance of publishing Articles  
**Organized by:** Pranveer Singh Institute of Technology, GBTU, Kanpur, India.
9. **Title of Lecture:** Pharmaceutical Drug Development and Review Process  
**Title of Conference:** National Seminar on “Trends in Research and Innovations in Life Sciences at Undergraduate Level”  
**Organized by:** Department of Zoology, Deen Dayal Upadhyaya College (University of Delhi), New Delhi, India.
10. **Title of Lecture:** Clinical Research Myths & Facts  
**Title of Conference:** 6th Annual Conference of the Oncologist of North East India” Silchar, Assam  
**Organized by:** Oncologist Society of North East India” Silchar, Assam, India.

#### ***Paper Presentations:-***

1. **Title:** Effect of Aloe vera mill gel on oxidative stress and role of cholinergic system  
**Title of Conference:** International Conference on Recent Trends in Medicinal and Aromatic Plant Research  
**Organized by:** Department of Life Sciences, Assam University, Silchar.
2. **Title:** Pharmacokinetics in Sports  
**Title of conference:** National Conference on Biomechanics, 2004  
**Organized by:** Indian Institute of Technology, New Delhi.
3. **Title:** Restructuring Pharmacy Curricula  
**Title of conference:** Indian Hospital Pharmacist Association, Golden Jubilee, 2014  
**Organized by:** Hospital Pharmacy Foundation, BBA University, Lucknow
4. **Title:** Smoking Habits among the youth of Delhi University  
**Title of conference:** 56th IPC -Poster Presentation “Hospital Pharmacy”, 2004  
**Organized by:** Indian Pharmaceutical Congress

#### **Awards and Recognitions**

1. **Research and Academic Excellence Award (2020)** “Life Sciences and Environmental Sciences”- BBAU.

2. **Award of appreciation** for the work "Modulating Prolyl Hydroxylase (PHD2) activity to alter glycolytic pathway and fatty acid synthase expression in tumor cells" - **Cancer Research Foundation, India, 2020.**
3. **Young Scientist Award,** European Inst. of Scientific Research on Ayurveda, Netherland, 2015
4. **Research and Academic Excellence Award (2014)** "Life Sciences and Environmental Sciences"- BBAU, 2014.
5. **Raman Postdoctoral Fellowship-** M D Anderson Cancer Research Institute, Texas (Could not avail), 2013
6. **INSA Visiting Scientist Fellowship-** Department of Biophysics, AIIMS, New Delhi, Jun-Aug 2013.
7. **IASc-INSA-NASI Summer Training Fellowship-** National Institute of Immunology, New Delhi, Jun-Aug 2011.
8. **GATE Fellowship, 2003-** Department of Pharmacology, Jamia Hamdard, New Delhi.

#### Academic Qualifications

**2010: Ph.D. (Pharmacology):** Supervisor- **Dr. Deepak Majumdar;** Submitted to Department of Pharmaceutical Sciences, Sam Higginbottom University of Agriculture, technology and Sciences, Allahabad(Formerly Allahabad Agricultural Institute-Deemed to be University), India.

**2005: M. Pharm (Pharmacology):**Department of Pharmacology, Faculty of Pharmacy, Jamia Hamdard NewDelhi.

**2003: B. Pharm (Anatomy, Pharmacology, Pharmaceutics):** DPSRU, New Delhi

#### Teaching Experience

1. **Assistant Professor (Oct, 2010 - Sep, 2011):**  
Department of Pharmaceutical Sciences,  
SHIATS, Formerly Allahabad Agricultural Institute-Deemed University,  
Allahabad- 211 007, Uttar Pradesh
2. **Assistant Professor (Oct, 2010 - Sep, 2011):**  
Department of Pharmaceutical Sciences,  
Assam University (Central University), Silchar-788 011, Assam
3. **Assistant Professor (Sep, 2011- Nov, 2017)**  
Department of Pharmaceutical Sciences,  
Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh
4. **Associate Professor (Nov, 2017- Nov, 2022):**  
Department of Pharmaceutical Sciences,  
Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh

**5. Professor (Nov, 2020 - till now):**

Department of Pharmaceutical Sciences,  
Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh

**6. Head (Oct, 2020 - till now):**

Department of Pharmaceutical Sciences,  
Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh

**7. Dean (Nov, 2021 - till now):**

School of Pharmaceutical Sciences,  
Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh

**8. Associate Dean, Academic Affairs (Sep, 2020 - till now):**

Babasaheb Bhimrao Ambedkar University (Central University),  
Lucknow- 226 025, Uttar Pradesh

**Memberships of the Professional Bodies**

1. Association of Pharmacy Teachers of India: UPLM- 126
2. Science Advisory Board, USA- Life Member: 101350
3. Laboratory Animal Science Association of India: Life Member
4. Zoology Society of India: Life Member: G38

Date:

(Gaurav Kaithwas)