

## **Publications (School of Biochemistry)**

**2019**

### **Research articles**

Are VN, Jamdar SN, Ghosh B, Goyal VD, Kumar A, Neema S, Gadre R, Makde RD (2019). Structures and activities of widely conserved small prokaryotic Aminopeptidases P clarify classification of M24B peptidases Proteins: Structure, Function and Bioinformatics: 87(3), 212-224. Online ISSN 1097-0134

Sonal Dhamgaye, Nitu Gupta, Aanchal Shrotriya, Vishal Dhamgaye and Rekha Gadre (2019). Biological Effects of Seed Irradiation by Synchrotron X Ray Beam in Young Bean seedlings. Advances in Biological Chemistry 9 (2): 88-97. ISSN Print: 2162-2183. Online: 2162-2191

Sunita Kataria, Lokesh Baghel, Meeta Jain, K.N.Guruprasad (2019). Magnetopriming regulates antioxidant defense system in soybean against salt stress. Biocatalysis and Agricultural Biotechnology 18: 101090. ISSN: 1878-8181

Lokesh Baghel, Sunita Kataria, Meeta Jain (2019.) Mitigation of adverse effects of salt stress on germination, growth, photosynthetic efficiency and yield in Maize (*Zea mays* L.) through magnetopriming. Acta Agro Botanica 72(1): 1757. ISSN: 0065-0951

Mamta Hirve and Meeta Jain (2019). Early seedling growth affected by CuSO<sub>4</sub> and its combination with PEG 6000 in maize. Plant Science Today: 6(2): 1-10. ISSN: 2348-1900

Mamta Hirve and Meeta Jain (2019). Early seedling growth responses and anatomical variations in Ganga Safed-2 maize genotype under chromium and water deficit stress. Research Journal of Chemistry and Environment (In Press). ISSN: 0972-0626

Meeta Jain and Jayesh Vaishnav (2019). Salt Stress Induced Effects on Biochemical Parameters in Etiolated Maize Leaf Segments during Greening. African Journal of Biological Sciences 1(3): 22-31. ISSN: 2663-2187

Pooja Yadav, Venuka Durani Goyal, Khileshwari Chandravanshi, Ashwani Kumar, Sadashiv M. Gokhale, Sahayog N. Jamdar and Ravindra D. Makde (2019). Catalytic triad heterogeneity in S51 peptidase family: Structural basis for functional variability. Proteins: Structure, Functions and Bioinformatics 87: 679-692 (<https://doi.org/10.1002/prot.25693>). Online ISSN: 1097-0134

Pooja Yadav, Venuka Durani Goyal, Neeraj Kailash Gaur, Ashwani Kumar, Sadashiv M. Gokhale, Sahayog N. Jamdar and Ravindra D. Makde (2019). Carboxypeptidase in prolyl oligopeptidase family: Unique enzyme activation and substrate-screening mechanisms. *Journal of Biological Chemistry* 294: 89-100 (doi: 10.1074/jbc.RA118.004254). Online ISSN: 1083-351X, Print ISSN: 0021-9258

### **Book chapters**

Meeta Jain, Sunita Kataria, Mamta Hirve and Rajkumar Prajapati. *Water Deficit Stress Effects and Responses in Maize* (2019). In: *Plant abiotic stress tolerance*. 129-151. Editors: Mirza Hasanuzzaman, Hakeem Kamrun, Nahar Khalid, Hesham Alharby, Springer Publisher. ISBN: 978-3-030-06118-0.

Mamta Hirve , Meeta Jain, Sunita Kataria and Dugresh Kumar Tripathy. *Heavy metals, water deficit and their interaction in plants: An overview*. In: *Plant life under changing environment- Responses and management*. Elsevier (2019). Editors: D.K. Tripathy, V.P. Singh. S. Sharma. S.M. Prasad, D.K. Chauhan. N.K. Dubey, N. Ramawat. (In Press)

Sonika Sharma, Sunita Kataria, Meeta Jain and Dugresh Kumar Tripathy. *Regulation of Calvin cycle under abiotic stresses: An overview*. In: *Plant life under changing environment- Responses and management*. Elsevier (2019). Editors: D.K. Tripathy, V.P. Singh. S. Sharma. S.M. Prasad, D.K. Chauhan. N.K. Dubey, N. Ramawat. (In Press)

## **2018**

### **Research articles**

Radhika (Chinchalkar) Waghmare and RekhaGadre (2018). Impact of essential micronutrient, Zn, on growth and chlorophyll biosynthesis in young *Zea mays* seedlings. *American J of Plant Science* 9(9): 13 pages Article ID: 86756. ISSN Print: 2158-2742, Online: 2158-2750

Sonal Dhamgaye and RekhaGadre (2018). Salinity stress effects being mediated via nitric oxide in common bean (*Phaseolus vulgaris*) Seedlings. *J. Bio. Innov.* 7 (4): 599-610. ISSN: 0019-5502

Sonal Dhamgaye, Vishal Dhamgaye and RekhaGadre (2018). Growth retardation at different stages of bean seedlings developed from seeds exposed to synchrotron X ray beam. *Advances in Biological Chemistry*. 8 (2): 29-35. ISSN Print: 2162-2183. Online: 2162-2191

M. Jain, S. Tiwary, and R. Gadre (2018). Modulation of  $\delta$ -Aminolevulinic Acid Dehydratase Activity by the Sorbitol Induced Osmotic Stress in Maize Leaf Segments. *Biochemistry (Moscow)* 83 (1): 95-100. ISSN 0006-2979(Print), 1608-3040 (Electronic)

Pooja Yadav, Venuka Durani Goyal, Neeraj K. Gaur, Ashwani Kumar, Sadashiv M. Gokhale and Ravindra D. Makde (2018). Structure of Asp-bound peptidase E from *Salmonella enterica*: Active site at dimer interface illuminates Asp recognition. *FEBS Letters* 592: 3346-3354 (doi:10.1002/1873-3468.13247). Online ISSN: 1873-3468 Print ISSN: 0014-5793

Sharma H, Joshi A, Lad H and Bhatnagar D (2018). Anti-oxidative, anti-inflammatory and anti-atherosclerotic effect of taurine on hypercholesterolemia induced atherosclerotic rats. *Int. J. Pharm. Pharmaceu. Sci.* 10: 145-150. Online ISSN: 0975-1491 Print ISSN: 2656-0097

Shukla S, Sahu K, Sharma P, Joshi A, Bhatnagar D (2018). Assessment of the antioxidant activity of *Quercus infectoria* gall extract and its efficacy in wound healing using Optical Coherence Tomography in Swiss albino mice. *European Journal of Biomedical and Pharmaceutical Sciences*, 5(3): 367-376. ISSN 2349-8870

Joshi A, Lad H, Sharma H, Bhatnagar D (2018). Evaluation of phytochemical composition and antioxidative, hypoglycaemic and hypolipidemic properties of methanolic extract of *Hemidesmus indicus* roots in STZ induced mice. *Clinical Phytoscience*, 4:7-15. ISSN 2199-1197

### **Book chapters**

Sunita Kataria, Meeta Jain, Anshu Rastogi, Marek Živčák, Marian Brestic and Durgesh Kumar Tripathy (2018). Role of Nanoparticles on Photosynthesis: Avenues and applications. In: *Nanomaterials in Plants, Algae and Microorganisms: Concepts and Controversies*. Volume 2. 103-127. Editors: Parvaiz Ahmed, Durgesh Tripathy, D.K. Chouhan, N.K. Dubey and Shivesh Sharma. Publisher: Elsevier Incorporation. ISBN: 978-0-12-811488-9.

Sunita Kataria, Meeta Jain (2018) Magnetopriming alleviates adverse effects of abiotic stresses on plants.. In: *Plant Tolerance to Environmental Stress: Role of Exogenous Phytoprotectants*. Editors: Mirza Hasanuzzaman, Masayuki Fujita, Hirotsugu Oku and Md. Tofazzal Islam. Publisher: Taylor & Francis Group, LLC, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, Florida 33487, U.S.A.(In Press).

Sunita Kataria, Meeta Jain, Mansi Kanungo and Sonika Sharma. Wheat responses and tolerance to UV-B radiation: an Overview (2018). In: *Wheat Production in Changing Environments -Management, Adaptation and Tolerance*. Editors: Editors: Dr. Mirza Hasanuzzaman, Dr. Kamrun Nahar and Dr. Amzad Hossain Publisher: Springer Nature, Singapore. 2018 (In Press).

Prakash Malviya, S.V. Sai Prasad, Meeta Jain and Divya Ambati. Canopy Temperature as Selection Parameter for improving Grain Yield under early Heat Stress conditions in Durum Wheat (2018). *Multilogic in Science*, VOL. VIII, ISSUE XXVII, OCT 2018. ISSN No. 2277-7601.

Meeta Jain, Sunita Kataria, Mamta Hirve and Rajkumar Prajapati. Water Deficit Stress Effects and Responses in Maize. In: Plant abiotic stress tolerance- Agronomic, molecular and biotechnological approaches (2018). Editors: Mirza Hasanuzzaman, Khalid Rehman Hakeem, Kamrun Nahar, Hesham Alharby, Springer Publisher, (In Press).

Mamta Hirve , Meeta Jain, Sunita Kataria and Dugresh Kumar Tripathy. Heavy metals, water deficit and their interaction in plants: An overview. In: Plant life under changing environment- Responses and management. Elsevier (2018). Editors: D.K. Tripathy, V.P. Singh. S. Sharma. S.M. Prasad, D.K. Chauhan. N.K. Dubey, N. Ramawat. (In Press).

Sonika Sharma, Sunita Kataria, Meeta Jain and Dugresh Kumar Tripathy. Regulation of Calvin cycle under abiotic stresses: An overview. In: Plant life under changing environment- Responses and management. Elsevier (2018). Editors: D.K. Tripathy, V.P. Singh. S. Sharma. S.M. Prasad, D.K. Chauhan. N.K. Dubey, N. Ramawat. (In Press).

**2017**

#### **Research articles**

Are VN, Jamdar SN, Ghosh B, Goyal VD, Kumar A, Neema S, Gadre R, Makde RD (2017). Crystal structure of a novel prolidase from *Deinococcus radiodurans* identifies new subfamily of bacterial prolidases. *Proteins*. 85: 2239-2251. (doi:10.1002/prot.25389). PubMed PMID: 28929533. ISSN: 0887-3585 (Print), 1097-0134 (Electronic)

Meeta Jain, Mahija Panwar and Rekha Gadre (2017). Influence of Selenium Supplementation on  $\delta$ -Aminolevulinic Acid Formation in Greening Maize Leaf Segments. *Research Journal of Phytochemistry* (DOI: 10.3923/rjphyto.2017). eISSN: 2151-6081, pISSN: 1819-347

Sarengetham, J., Dhamgaye, S. and Gadre, R. (2017). Cadmium effects on enzymes of ammonia assimilation in excised etiolated maize leaf segments during greening : A mechanistic approach. *American J of Plant Science* 8 (6): 1399-1410 (DOI: 10.4236/ajps.2017.86095). ISSN Print: 2158-2742 ISSN Online: 2158-2750

Prakash Malviya, S.V. Saiprasad, Meeta Jain and Divya Ambati (2017). Genetic divergence and gene source studies in durum wheat genotypes under early sown and moisture stress conditions. *Indian Journal of Plant Genetic Resources*. 30(2): 144- 148. ISSN: 0971-8184.

Vinny Punjabi and Sadashiv M Gokhale (2017). Effect of free radical generating system- Adenosine Triphosphate/Ferrous Sulphate/Hydrogen Peroxide on human erythrocytes. *Inter. J. of Contemporary Res. and Rev.* 8 (7): 20184-20192. Online ISSN: 0976 – 4852

Venkat N Are; Ashwani Kumar; Saurabh Kumar; Venuka Durani Goyal, Ph.D.; Biplab Ghosh; Deepak Bhatnagar; Sahayog N Jamdar; Ravindra D Makde (2017). Crystal structure

and biochemical investigations reveal novel mode of substrate selectivity and illuminate substrate inhibition and allostericity in a subfamily of Xaa-Pro dipeptidases *Biochimica Biophysica Acta BBA – Proteins and Proteomics* 1865 (2). ISSN 1570-9639

Harsha Lad and Deepak Bhatnagar (2017). Modulation of oxidative stress mediators in the liver of adjuvant induced arthritic rats by *Nyctanthes arbor tristis* *Clinical Phytoscience*, 3: 1-8. ISSN 2199-1197

Fatima A, Agrawal AK, Singh B, Bhatnagar D, Sharma H, Kashyap Y and Shripathi T (2017). Synchrotron Based Phase Contrast Tomography of Hypercholesteromic Rat Liver. *Int. J. Med. Res. Health Sci.* 6: 115-125. ISSN 2313-5886

Sinha V, Sarin NB and Bhatnagar D. (2017). The efficacy of antisense-based construct for inducing resistance against croton yellow vein mosaic virus in *Nicotiana tabacum*, *Virus Genes* 53: 906-912. ISSN: 0920-8569 (Print) 1572-994X (Online)

## 2016

### Research articles

Tiwary, S., Gadre, R., Jain, M. (2016). Osmotic stress induced changes in chlorophyll biosynthesis and antioxidative system in light grown maize leaves. *J Bio Innovations*. 5(1): 123-137. ISSN: 0019-5502 Online: 2277-8330

Venkat N. Are, Biplab Ghosh, Ashwani Kumar, Rekha Gadre, Ravindra D. Makde (2016). Crystal structure and dynamics of Spt16 N-domain of FACT complex from *Cicer arietinum*. *International Journal Biological Macromolecules* 88: 36–43. ISSN: 0141-8130 (Print), 1879-0003 (Electronic)

Gunapati, S., Ram Naresh, Ranjan, S., Hans, A., Nigam, D., Verma, P.C., Gadre, R., Pathre, U., Sane, A., and Sane V. (2016) Expression of GhNAC2 from *G. herbaceum* improves root growth and imparts tolerance to drought in transgenic cotton and *Arabidopsis*. *Scientific Reports*, 6-24978. DOI 10:1038/srep 24978. ISSN 2045-2322

Gupta, P., Sarengetham, J., Dhamgaye, S. and Gadre, R. (2016) Differential effect of aluminium on enzymes of nitrogen assimilation in excised bean leaf segments. *Advances in Biological Chemistry* 6: 106-113. ISSN Print: 2162-2183 ISSN Online: 2162-2191

Vaishali Mourya, Vineet Kumar, Anita Rani, Meeta Jain and S. M. Husain (2016). “Near-Infrared Reflectance Spectroscopy for Protein Content in Soybean Flour and Screening of Germplasm Across Different Countries”. *Agricultural Research* 5(1): 29–34. ISSN: 2249-720X (print version) ISSN: 2249-7218 (electronic version).

Swati T., and Meeta J. (2016). "Impact of Osmotic Stress on Biochemical and Physiological Parameters in *Zea mays* L. cv. Ganga Safed-2 Genotype, Maize Genomics and Genetics, 7(01): 1-14 (doi: 10.5376/mgg.2016.07.0001). ISSN: 1925-1971.

Sinha V, Kumar A, Sarin NB, Bhatnagar D (2016). Recombinant croton yellow vein mosaic virus associated with severe leaf curl disease of papaya in India. Int. J. Adv. Res. 4 (3): 598-604. ISSN 2320-5407

Harsha Lad, Ankita Joshi, Deepti Dixit, Harsha Sharma and Deepak Bhatnagar (2016). Antioxidant, genoprotective and immunomodulatory potential of *Vitex negundo* leaves in experimental arthritis. Oriental Pharmacy and Experimental Medicine 16: 217-224. ISSN 1598-2386

Harsha Lad and Deepak Bhatnagar (2016). Amelioration of oxidative and inflammatory changes by *Swertia chirayata* leaves in experimental arthritis. Inflammopharmacology 24: 363–375. ISSN 0925-4692

## 2015

### Research articles

Dhamgaye, S., Gadre, R. (2015). Salinity stress effects on growth and nitrate assimilation in bean seedlings likely to be mediated via Nitric Oxide. J Stress Physiol. Biochem. 11(4): 137-146. ISSN 1997-0838

Jain, M., Thapa, M., Pradhan, P., Meena, S., Vaishnav, J. and Gadre, R. (2015). Effect of arsenic on d-aminolevulinic acid formation in greening maize leaf segments. Ind J Plant Physiol. 20(3): 191–196 (DOI 10.1007/s40502-015-0158-3). ISSN: 0019-5502 (print), 0974-0252 (electronic)

Kumar, J., Gunapati, S., Alok, A., Lalit, A., Gadre, R., Sharma, N. C., Roy, J.K. and Singh, S. P. (2015). Cotton leaf curl Burewala virus with intact or mutant transcriptional activator proteins: complexity of cotton leaf curl disease. Arch Virol. 160: 1219-1228. ISSN: 0304-8608 (Print) 1432-8798 (Online)

Jayesh Vaishnav and Meeta Jain (2015). "Influence of halopriming and hydropriming on seed germination and growth characteristics of *Zea mays* L. cv. GSF-2 under salt stress". Research Journal of Chemistry and Environment 19(10): 1-6 ISSN: 0972-0626.

Meeta Jain, Arpita Shrivastava, Prakash Malviya and Jayesh Vaishnav (2015). "Comparative evaluation of biochemical characteristics in three genotypes of Maize (*Zea mays*)". Indian Journal of Agricultural Biochemistry 28 (1): 61-64. ISSN: 0970- 6399.

Akanksha Singh, Antariksh Tyagi, Abhinandan Mani Tripathi, Sadashiv M. Gokhale, Nandita Singh and Sribash Roy (2015). Morphological trait variations in the west Himalayan (India) populations of *Arabidopsis thaliana* along altitudinal gradients. *Current Science* 108 (12): 2213-2222. Online ISSN: 0011-3891

Lad H, Dixit D, Joshi A and Bhatnagar D (2015). Antioxidant and antiinflammatory effects of *Vitex negundo* on Freund's complete adjuvant induced arthritis. *International Journal of Pharmacy and Pharmaceutical Sciences*. 7: 81-85. ISSN 0975-1491

## 2014

### Research articles

Seema Kelotra, Meeta Jain, Ankit Kelotra, Ish Jain, Srinivas Bandaru, Anuraj Nayarisseri and Anil Bidwai (2014). "An *in silico* Appraisal to Identify High Affinity Anti-Apoptotic Synthetic Tetrapeptide Inhibitors Targeting the Mammalian Caspase 3 Enzyme". *Asian Pacific Journal of Cancer Prevention* 15: 10137-10242. Print ISSN: 1513-7368.

Prakash Malviya, S.V. Sai Prasad, Meeta Jain, Jang Bahadur Singh and Amit Gautam (2014). "Identification of imperative selection parameters for increasing grain yield and grain quality under early sown and moisture conditions in durum wheat (*Triticum durum desf.*)". *Progressive Research* 9 (1): 276-280. Print ISSN: 0973-6417 OnlineISSN: 2454-6003.

Reena Rawal, Vineet Kumar, Anita Rani, S M Gokhale and S M Husain (2014). Marker assisted backcross selection for genetic removal of lipoxygenase-2 from popular soybean (*Glycine max*) variety JS 97-52: Parental polymorphism survey and hybridity validation. *Indian Journal of Agricultural Sciences* 84 (3): 414-7. ISSN: 0019-5022

Savita Sharma, Vinny Punjabi, Surekha M. Zingde and Sadashiv M. Gokhale (2014). A comparative study of the membrane proteins of some mammalian erythrocytes identified by mass spectrometry. *J. Membrane Biology* 247(11): 1181-1189. Online ISSN: 1432-1424 Print ISSN: 0022-2631 (Springer)

Savita Sharma and Sadashiv M. Gokhale (2014). Enzymatic cleavage of cell surface proteins of pig and cow erythrocytes and its effect on concanavalin-mediated agglutinability. *Indian J Biochem Biophys* 51(5): 378-387. Online ISSN: 0975-0959 Print ISSN: 0301-1208

Ankit Kelotra, Sadashiv M Gokhale, Seema Kelotra, Vaidehi Mukadam, Komal Nagwanshi, Srinivas Bandaru, Anuraj Nayarisseri & Anil Bidwai (2014). Alkyloxy carbonyl modified hexapeptides as a high affinity compounds for Wnt5A protein in the treatment of psoriasis. *Bioinformation* 10(12): 739-745. Online ISSN: 0973-2063 Print ISSN: 0973-8894

Tyagi R, Rana P, Gupta M, Bhatnagar D, Srivastava S, Roy R, Khushu S (2014). <sup>1</sup>H NMR spectroscopic analysis detects metabolic disturbances in rat urine on acute exposure to heavy metal tungsten alloy based metals salt. *Chem Biol Interact.* 211: 20-28. ISSN 0009-2797

## 2013

### Research articles

Jain, M., Mittal, M. and Gadre, R. (2013). Effect of PEG-6000 imposed water deficit on chlorophyll metabolism in maize leaves. *J Stress Physiol. And Biochem.*, 9(3): 262-271. ISSN 1997-0838

Gupta, P., Jain, M., Juliana S., Gadre, R. (2013). Inhibition of 5 - aminolevulinic acid dehydratase by mercury in excised greening maize leaf segments. *Plant Physiol. Biochem.*, 62: 63-69. ISSN: 0981-9428 (Print) 1873-2690 (Electronic)

Kumar, J., Gunapati, S., Singh, S.P., Kumar, A., Lalit, A., Sharma, N.C., Puranik, R. and Tuli, R. (2013). A new betasetallite associated with cotton leaf curl Burewala virus infecting tomato in India : influence on symptoms and viral accumulation. *Arch. Virol.* 158: 1349-1353. ISSN: 0304-8608 (Print) 1432-8798 (Online)

Savita Sharma, Surekha M. Zingde and Sadashiv M. Gokhale (2013). Identification of human erythrocyte cytosolic proteins associated with plasma membrane during thermal stress. *J. Membrane Biology* 246 (8): 591-607. Online ISSN- 1432-1424, Print ISSN- 0022-2631 (Springer)

Sinha V, Kumar A, Bhatnagar D and Khan J A (2013). Association of Cotton leaf curl Multan virus and its satellite molecules with leaf curl disease of papaya in India. *New Disease Reports* 27: 9. ISSN 2044-0588.

Deepti Dixit, Amit Kumar Dixit, Harsha Lad, Damodar Gupta, Deepak Bhatnagar (2013). Radioprotective effect of Terminalia chebula Retzius extract against  $\gamma$ - irradiation induced oxidative stress. *Biomedicine and Ageing Pathology* 3(2): 83-88. ISSN: 2210-5220.

## 2012

### Research articles

Prakash Malviya, S.V. Sai Prasad, Meeta Jain and Amit Gautam. (2012). "Assessing grain yield and its components in durum wheat using canopy temperature as selection parameter under early heat stress conditions". *Progressive Research* 7 (special): 122-126. Print ISSN: 0973-6417 Online ISSN: 2454-6003.



Savita Sharma and Sadashiv M. Gokhale. (2012). Differential actions of proteinases and neuraminidase on mammalian erythrocyte surface and its impact on erythrocyte agglutination by concanavalin A. *Gen. Physiol. Biophys.* 31: 457–468. ISSN: 0231-5882

Kelotra A, Soumya VG , Kelotra S , Gokhale S M and Bidwai A K. (2012). Molecular docking of some herbal-based potential anti-psoriasis agents with dihydrofolate reductase. *Indian J. Drugs and Diseases* 1 (8): 192-199. ISSN: 2278-2958

Tyagi R, Rana P, Gupta M, Khan AR, M. Memita Devi, Bhatnagar D, Roy R, Tripathi RP and Khushu S (2012). Urinary metabolomic phenotyping of nickel induced acute toxicity in rat: an NMR spectroscopy approach. *Metabolomics* 8: 940-950. ISSN 1573-3882

Tyagi R, Rana P, Gupta N, Khan AR, Bhatnagar D , Bhalla PJS, Chaturvedi S, Tripathi RP and Khushu S (2012). Differential biochemical response of rat kidney towards low and high doses of nickel chloride as revealed by NMR spectroscopy. *J. Applied Toxicology* (DOI 10.1002/jat.1730). ISSN: 1099-1263

Amit Kumar Dixit, Deepti Bhatnagar, Vineet Kumar, D. Chawla, K. Fakhruddin, D Bhatnagar (2012). Antioxidant potential and radioprotective effect of soy isoflavone against gamma irradiation induced oxidative stress. *J. Functional Foods* 4: 197-206. ISSN: 1756-4646

Dixit AK, Bhatnagar D, Kumar V, Rani A, Manjaya JG, and Bhatnagar D. (2012). Influence of gamma irradiation on in vitro lipid peroxidation and antioxidant properties of soybean with different seed coat color. *International Journal of Food Properties* 15: 1171-1181. ISSN 1094-2912

Deepti Dixit, Amit Kumar Dixit, Harsha Lad, PJS Bhalla, Deepak Bhatnagar (2012). Protective effects of *Terminalia chebula* in modulating oxidative damages against gamma irradiation induced lethality in rats. *International Journal of Biological and Pharmaceutical Research*; 3(5): 734-742. ISSN 0976-3651

## **2011**

### **Research articles**

Juliana, S., Jain, M and Gadre, R. (2011) Inhibition of  $\delta$ -aminolevulinic acid dehydratase activity by cadmium in excised etiolated maize leaf segments during greening. *Plant Soil Environ.*, 57 (7): 332-337. ISSN 1214-1178 (Print), 1805-9368 (Online)

Bapna R.S., Bhargava S., Singh C.P. and Jain M. (2011). “A Study on Evaluation of Correlation between Different Therapy Options, Inhalation-Devices, Methods of Devices and

Safety Outcome in COPD Patients”. Research Journal of Chemistry and Environment, Vol.15 (2): 724-729. ISSN: 0972-0626.

Sangeeta Jain, Meeta Jain and C.S. Sharma (2011). “Changes In Respiratory Function And Lipid Profile Due To Yoga And Relaxation Techniques”. International Journal of Pharmacology and Biological Sciences. 5(2): 79-84. eISSN: 2230-7605; pISSN: 2321-3272.

Solubility behavior of integral proteins and glycoporphins of mammalian erythrocyte membrane. Savita Sharma and S. M. Gokhale (2011). Asian J. Exp. Biol. Sci. Vol. 2 (3): 449-454. ISSN: 0975-5845

Sialoglycoproteins of mammalian erythrocyte membranes: A comparative study. Savita Sharma and Sadashiv M. Gokhale (2011). Asian-Australian J. Anim. Sci. Vol. 24 (12): 1666-1673. Online ISSN 1976-5517, Print ISSN 1011-2367

Ritu Tyagi, Poonam Rana, Ahmed Raza Khan, D Bhatnagar, M. Memita Devi, Shubhra Chaturvedi, Rajendra P Tripathi and Subash Khushu (2011). Study of acute biochemical effects of thallium toxicity in mouse urine by NMR spectroscopy. J. App. Toxicol. 31: 663-670. ISSN: 1099-1263

Dixit AK, Kumar V, Rani A, Manjaya JG and Bhatnagar D. (2011). Effect of gamma irradiation on lipoxygenases, trypsin inhibitor, raffinose family oligosaccharides and nutritional factors of different seed coat colored soybean (*Glycine max L.*). Radiation Physics & Chemistry 80: 597-603. ISSN 0969-806X

## **2010**

### **Research articles**

Jain, M., Tiwary, S. and Gadre, R. (2010). Sorbitol-induced changes in various growth and biochemical parameters in maize. Plant Soil Environ. 56 (6): 263-267. ISSN 1214-1178 1805-9368 (Online)

Sangeeta Jain, Meeta Jain and C. S. Sharma (2010). “Effect of Yoga and Relaxation Techniques on Cardiovascular System”. Indian Journal of Physiology and Pharmacology 54(2): 183-185. ISSN :0019-5499

Yadav A S and Bhatnagar D (2010). Inhibition of iron induced lipid peroxidation and antioxidant activity of Indian spices and Acacia in vitro. Plant Food for Human Nutrition, 65: 18–24. ISSN 1573-9104

Azeez A, Aniruddha P. Sane, Tripathi SK, Bhatnagar D and Nath P (2010). The gladiolus *GgEXPA1* is a GA-responsive alpha-expansin gene expressed ubiquitously during expansion

of all floral tissues and leaves but repressed during organ senescence. *Postharvest Biology and Technology* 58: 48-56. ISSN 0925-5214

Kumar A, Kumar J, Khan ZA, Yadav N, Sinha V, Bhatnagar D and Khan JA (2010). Study of betasatellite from leaf curl disease of sunn hemp (*Crotalaria juncea*) in India. *Virus Genes* 41: 432-440. ISSN: 0920-8569

Kumar V, Rani A, Dixit AK, Pratap D and Bhatnagar D (2010). A comparative assessment of total phenolic content, ferric reducing-anti-oxidative power, free radical-scavenging activity, vitamin C and isoflavones content in soybean with varying seed coat colour. *Food Research International*, 43: 323–328. ISSN 0963-9969

Dixit AK, Bhatnagar D, Kumar V, Rani A, Manjaya JG, and Bhatnagar D (2010). Gamma Irradiation induced enhancement in isoflavones, total phenol, anthocyanin and antioxidant properties of varying seed coat colored soybean. *Journal of Agricultural and Food Chemistry*, 58: 4298–4302. ISSN 0021-8561

## **2009**

### **Research articles**

Jain, M, Kaushal, A, Gupta, P. and Gadre, R. (2009). Osmotic stress induced reduction in chlorophyll formation in bean leaf discs. *J Plant Sci. Res.* Vol. 25 (1): 55-59. pISSN 2349-2850, eISSN: 0976-3880

Kumar K, Pujari N.S, Golegaonkar S.B, Ponrathnam S, Nene S.N, and Bhatnagar D. (2009). Vinyl-2-pyrrodone derivatised guar gum based aqueous two-phase system. *Separation and Purification Technology* 65: 9-13. ISSN: 1383-5866.

Kumar V, Rani A, Dixit AK, Bhatnagar D and Chauhan GS (2009). Relative changes in tocopherols, isoflavones, total phenolic content and antioxidative activity in soybean seeds at different reproductive stages. *Journal of Agricultural and Food Chemistry* 57: 2705-2710. ISSN 0021-8561.

## **2007**

### **Research articles**

Meeta Jain, Monika Pal, Priyanka Gupta and Rekha Gadre (2007). "Effect of Cadmium on Chlorophyll Biosynthesis and Enzymes of Nitrogen Assimilation in Greening Maize Leaf Segments: Role of 2-Oxoglutarate". *Ind. J. Expt. Biol.* 45: 385-389. ISSN: 0975-1009 (Online); 0019- 5189 (Print).

Meeta Jain and A.S. Raghavendra (2007).“Effect of Osmotic Stress on Production of Hydrogen Peroxide in Pea (*Pisum sativum*) Leaves and its Relationship to Shrinkage”. The Journal of Plant Science Research 23(1-2), 87. ISSN: 0970-2539; eISSN: 0976-3880.

Rathore H. S. , Ranjana Punyasi, Pooja Joshi, Deepika Rathore and Bhatnagar D. (2007) Studies on the reversal of lead induced mitostatic effect in *Allium Cepa* root tip cells with myrobalan (fruit of *Terminalia Chebula*, retz, Combretaceac. Internet J of Alternative Med. 4: 1-12.

Azeez A, Sane A P, Bhatnagar. D, and Nath P. (2007). Enhanced expression of serine proteases during floral senescence in *Gladiolus*. *Phytochemistry*, 68: 1352-1357.

Yadav A S and Bhatnagar D. (2007) Modulatory effect of spice extracts on iron induced lipid peroxidation in rat liver. *BioFactors* 29: 147-157.

Yadav A.S and Bhatnagar D. (2007) Chemo-preventive effect of Star anise in N-nitrosoamine and phenobarbitol promoted hepato-carcinogenesis. *Chemico Biological Interactions*. 169: 207-214.

Yadav A S and Bhatnagar D. (2007). Free radical scavenging activity, metal chelation and antioxidant power of some of the Indian spices. *BioFactors* 31: 219-228.

## **2006**

### **Research articles**

Rathore .S., Khare A., Sharma A., Shrivastava S and Bhatnagar D. (2006). A study on the cytological effects of myrobalan (fruit of *Terminalia chebula*) in *Allium test*. *Ethnobotanical Leaflets*. International Web Journal.

Karkare S and Bhatnagar D. (2006). Promising nucleic acid analogues and mimics: characteristic features and applications of PNA, LNA and morpholino. *Applied Microbiol. Biotech.* 71: 575-586.

## **2005**

### **Research articles**

Gupta, P. and Gadre, R. (2005). Increase in NADH-glutamate dehydrogenase activity by mercury in excised bean leaf segments. *Ind J Expt. Biol.*, 43: 824-828. ISSN 0019-5189 (Print), 0975-1009 (Online)

Bansal AK, Bansal M, Soni G, and Bhatnagar D. (2005). Modulation of N-nitrosodiethylamine (NDEA) induced oxidative stress by vitamin E. *Human Exptal. Toxicol.* 24: 297-302.

Bansal A.K., Bansal M, Soni G and Bhatnagar D. (2005). Protective role of vitamin E pretreatment on N-nitrosodiethylamine induced oxidative stress in rat liver. *Chemico Biological Interactions*. 156: 101-111.

**2004**

**Research articles**

Jain, M. &Gadre (Puranik) R. (2004). Inhibition of 5 amino Levulinic acid dehydratase activity by arsenic in excised etiolated maize leaf segments during greening. *J Plant Physiol*.161(3): 251-255. ISSN: 0176-1617 (Print), 1618-1328 (Electronic)

Jain, M. &Gadre, R. (2004). Inhibition of chlorophyll biosynthesis by mercury in excised greening maize leaf segments : Role of 2 oxoglutarate. *Indian J Expt. Biol.* 42: 419-423. ISSN 0019-5189 (Print), 0975-1009 (Online)

Karkare S, Daniel S and Bhatnagar D. (2004). RNA interference silencing the transcriptional message. *Applied Biochem Biotech.* 119: 1-12.

Rathore. H.S, Soni S. and Bhatnagar.D. (2004). Hypocholesterolemic effect of Terminalia chebula fruit (myrobalan) in mice. *Ancient Science of Life*. XXIII 11-15,