

## Publications:

### a) Research papers in journals:

1. DNA repair and crossing over favor similar chromosome region as discovered in radiation hybrid of *Triticum*. A. Kumar, F. M. Bassi, E. Paux, O. Al-Azzam, M. M. de Jimenez, A. M. Denton, Y. Q. Gu, E. Huttner, A. Kilian, S. Kumar, A. Goyal, M. J. Iqbal, V. Tiwari, M. Dogramaci, H. S. Balyan, H. S. Dhaliwal, P. K. Gupta, **G. S. Randhawa**, C. Feuillet, W. P. Pawlowski & S. F. Kianian. **BMC Genomics** 13 : 339 (2012) doi : 10.1186/1471-2164-13-339
2. Evaluation and identification of wheat-*Aegilopes* addition lines controlling high grain iron and zinc concentration and mugineic acid production. K. Neelam, N. Rawat, V. K. Tiwari, R. Prasad, S. K. Tripathi, **G. S. Randhawa** & H. S. Dhaliwal. **Cereal Research Communications** 40 : 53-61 (2012).
3. Determination of bioavailable-zinc from biofortified wheat using a coupled *in-vitro* digestion/Caco-2 reporter-gene based assay. R. Salunke, N. Rawat, V. K. Tiwari, K. Neelam, **G. S. Randhawa**, H. S. Dhaliwal & P. Roy. **Journal of Food Composition and Analysis** 25:149-159 (2012).
4. Development and molecular characterization of wheat-*Aegilops kotschy* addition and substitution lines with high grain protein, iron and zinc. N. Rawat, K. Neelam, V. K. Tiwari, **G. S. Randhawa**, B. Friebe, B. S. Gill & H. S. Dhaliwal. **Genome** 54 : 943-953 (2011).
5. Ischemic insult induced apoptotic changes in PC12 cells : Protection by *trans resveratrol*. M. Agrawal, V. Kumar, M. P. Kashyap, V. K. Khanna, **G. S. Randhawa** & A. B. Pant. **European Journal of Pharmacology** 666 : 5-11 (2011).
6. Bioavailability of iron from wheat *Aegilops* derivatives selected for high grain iron and protein contents. R. Salunke, K. Neelam, N. Rawat, V. K. Tiwari, **G. S. Randhawa**, H. S. Dhaliwal & P. Roy. **Journal of Agricultural and Food Chemistry** 59 : 7465-7473 (2011) & DOI: 10.1021/jf202913e.
7. Introgression of group 4 and 7 chromosomes of *Ae. peregrina* in wheat enhances grain iron and zinc density. K. Neelam, N. Rawat, V. K. Tiwari, S. Kumar, P. Chhuneja, K. Singh, G. S. Randhawa & H. S. Dhaliwal. **Molecular Breeding** 28 : 623-634(2010).

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8. Random chromosome elimination in synthetic wheat-*Aegilops* amphiploids leads to development of a stable partial amphiploid with high grain micro and macronutrient content and powdery mildew resistance. V. K. Tiwari, N. Rawat, K. Neelam, S. Kumar, **G. S. Randhawa** & H. S. Dhaliwal. **Genome** 53 : 1053-1065 (2010).
9. A novel method to alleviate arsenic toxicity in alfalfa plants using a deletion mutant strain of *Sinorhizobium meliloti*. D. P. Panigrahi & **G. S. Randhawa**. **Plant Soil** 336 : 459-467 (2010).
10. Identification of *Aegilops* species with higher production of phytosiderophore and iron and zinc uptake under micronutrient sufficient and deficient conditions. K. Neelam, V. K. Tiwari, N. Rawat, S. K. Tripathi, **G. S. Randhawa** & H. S. Dhaliwal. **Plant Genetic Resources : Characterization and Utilization** 8 : 132-141(2010).
11. Substitution of 2S and 7U chromosomes *Aegilops kotschy* in wheat enhances grain iron and zinc concentration. V. Tiwari, N. Rawat, K. Neelam, S. Kumar, **G. S. Randhawa** and H. Dhaliwal. **Theoretical and Applied Genetics** 121 : 259-269 (2010).  
**Citations in journals : 3**
12. A candidate gene *OSAPC6* of anaphase-promoting complex of rice identified through T-DNA insertion. M. Kumar, P. Osmanbasha, A. Bhalla, D. Rajpurohit, T. Jhang, V. Garg, T. R. Sharma, **G. S. Randhawa**, S. Kianian & H. S. Dhaliwal. **Functional and Integrative Genomics** 10 : 349-358 (2010).  
**Citations in journals : 1**
13. The polyembryo gene (*OsPE*) in rice. A. Puri, P. O. Basha, M. Kumar, D. Rajpurohit, **G. S. Randhawa**, S. F. Kianian, A. Rishi & H. S. Dhaliwal. **Functional and Integrative Genomics** 10 : 359-366 (2010).  
**Citations in journals : 1**
14. Genetic control of seed dormancy in basmati rice. M. Kumar, D. Rajpurohit, P. O. Basha, A. Bhalla, **G. S. Randhawa** & H. S. Dhaliwal. **Madras Agric. J.** 96 : 305-308 (2009).
15. Linkage mapping of polyembryonic, oligoculm and gibberellic acid insensitive dwarf insertional mutants of *Oryza sativa* var. Basmati 370. A. Bhalla, P. O. Basha, M. Kumar, K. Singh, D. Rajpurohit, **G. S. Randhawa** & H. S. Dhaliwal. **SABRAO Journal of Breeding & Genetics** 41 : 13-23 (2009).  
**Citations in journals : 2**
16. Development and characterization of *Triticum aestivum-Aegilops kotschy* amphiploids with high grain iron and zinc content. N. Rawat, V. K. Tiwari, K. Neelam, **G. S. Randhawa**, P. Chhuneja, K. Singh, & H. S. Dhaliwal. **Plant Genetic Resources : Characterization and Utilization** 7 : 271-280 (2009).  
**Citations in journals : 2**
17. Molecular mapping of high grain iron and zinc related QTLs in a diploid RIL wheat population. V. K. Tiwari, N. Rawat, P. Chhuneja, K. Neelam, R.

Agarwal, K. Singh, **G. S. Randhawa** & H. S. Dhaliwal. **Journal of Heredity** 100 : 771(2009).

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18. Evaluation and utilization of *Aegilops* and wild *Triticum* species for enhancing iron and zinc content in wheat. N. Rawat, V. K. Tiwari, N. Singh, **G. S. Randhawa**, K. Singh, P. Chhuneja & H. S. Dhaliwal. **Genet. Resour. Crop Evol.** 56 : 53-64 (2009).

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19. Development of *Triticum turgidum* subsp *durum*-*Aegilops longissima* amphiploids with high iron and zinc content through unreduced gamete formation in F-1 hybrids. V. K. Tiwari, N. Rawat, K. Neelam, **G. S. Randhawa**, K. Singh, P. Chhuneja & H. S. Dhaliwal. **Genome** 51 : 757-766 (2008).

**Citations in journals : 9**

20. Guar Seed  $\beta$ -Mannan Synthase Is a Member of the Cellulose Synthase Super Gene Family. K. S. Dhugga, R.Barreiro, B. Whitten, K.Stecca, J. Hazebroek, **G. S. Randhawa**, M. Dolan, A. J.Kinney, D.Tomes, S. Nichols, P.Anderson. **Science** 303: 363-366 (2004).

**Citations in journals : 118**

21. Isolation and symbiotic characterization of transposons Tn5-induced arginine auxotrophs of *Sinorhizobium meliloti*. A. Kumar, N. Vij and G. S. Randhawa. **Indian J. Exp. Biol.** 41 : 1198-1204 (2003). PMID: 15242285 [PubMed - indexed for MEDLINE].

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22. Symbiotic characterization of cysteine and methionine auxotrophs of *Sinorhizobium meliloti*. B.A. Abbas, K.E. Vineetha, C.K. Prasad, N. Vij, R. Hassani & **G.S. Randhawa**. **Indian J. Exp. Biol.** 40: 1121-1130 (2002). PMID: 12693691 [PubMed - indexed for MEDLINE].

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23. Symbiotic characterization of isoleucine+valine and leucine auxotrophs of *Sinorhizobium meliloti*. R. Hassani, C.K. Prasad, Vineetha K.E., N. Vij, P. Singh, S. Yadav, R. Sud & **G.S. Randhawa**. **Indian J. Exp. Biol.** 40: 1110-1120 (2002). PMID: 12693690 [PubMed - indexed for MEDLINE].

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24. Ultrastructural studies on nodules induced by pyrimidine auxotrophs of *Sinorhizobium meliloti*. Vineetha K.E., N. Vij, C.K. Prasad, R. Hassani & **G.S. Randhawa**. **Indian J. Exp. Biol.** 39: 371-377 (2001). PMID: 11491584 [PubMed - indexed for MEDLINE].

**Citations in journals : 10**

25. Isolation and symbiotic characterization of aromatic amino acid auxotrophs of *Sinorhizobium meliloti*. C.K. Prasad, Vineetha K.E., R. Hassani, R. Gupta & **G.S.**

**Randhawa. Indian J. Exp. Biol.** 38: 1041-1049 (2000). PMID: 11324158 [PubMed - indexed for MEDLINE].

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26. Toxicity of pesticides 2,4-D and cypermethrin on *Rhizobium meliloti*. N. Vij, **G.S. Randhawa** and A.K. Chopra. **Chem. Env. Res.** 7: 123-138 (1998).
27. Prevalence and transfer of R-plasmids in *Escherichia coli* isolates from healthy adults. A.B. Pant, R.K. Bedi & **G.S. Randhawa. Indian Vet. Med. Jour.** 22: 179-183 (1998).
28. Plasmid elimination from clinical isolates of *Escherichia coli* by ciprofloxacin and other inhibitors of DNA gyrase. A.B. Pant, **G.S. Randhawa**, G.D. Sharma & M.K. Kapil. **Biotechnology Techniques** 8: 209-213 (1994).

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29. Introduction of a segment of *Rhizobium meliloti* megaplasmid into *E. coli* slows down its growth in minimal medium. R. Choubey, **G.S. Randhawa**, A. Dixit & C.B. Sharma. **Indian J. Exp. Biol.** 30: 257-259 (1992). PMID: 1459590 [PubMed - indexed for MEDLINE]
30. Construction and characterization of R-prime plasmids carrying symbiotic genes of *Rhizobium meliloti*. Z. Banfalvi, **G.S. Randhawa**, E. Kondorosi, A. Kiss & A. Kondorosi. **Mol. Gen. Genet.** 189: 129-135 (1983).

**Citations in journals : 38**

31. Introduction of symbiotic genes of *Rhizobium meliloti* into other rhizobial and *Agrobacterium*. Z. Banfalvi, E. Kondorosi, G. S. Randhawa et al. **Acta Microbiologica Hungarica** 31 : 234 (1984).
32. Localization of symbiotic mutations in *Rhizobium meliloti*. T. Forrai, E. Vincze, Z. Banfalvi, G.B. Kiss, **G.S. Randhawa** & A. Kondorosi. **J. Bacteriol.** 153: 635-643 (1983).

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#### **b) Other publications in journals:**

1. Understanding life : by making and breaking the cell. **G. S. Randhawa**, D. P. Panigrahi & K. A. Nagesh. **Indian J. Microbiol.** 50 : 247-248 (2010).
  2. Plant cell wall matrix polysaccharide biosynthesis (Review Article). A. P. S. Sandhu, **G. S. Randhawa** & K. S. Dhugga. **Molecular Plant** 2 : 840-850 (2009).
- Citations in journals : 11**
3. Review of the book entitled “Microbial Biotechnology”, Editor : Ratul Saikia. **Indian J. Exp. Biol.** 46 : 258 (2008).
  4. News Scan : Underground strategies of an invader; MicroRNAs rescued from neglect & Recent report of a novel reporter. **G.S.Randhawa** & Shubha G. **Indian J. Exp. Biol.** 41: 1352-1353 (2003).
  5. News Scan: Yeast made somewhat human to produce human proteins. **G.S.Randhawa** & Shubha G. **Indian J. Exp. Biol.** 41: 1352-1353 (2003). PMID: 15332514 [PubMed - indexed for MEDLINE].

6. Recent advances in *Rhizobium*-legume symbiosis. **G.S.Randhawa**, Shubha G.,N.K.Singh, A.Kumar & A.Bhalla. **Indian J. Exp. Biol.** 41: 1184-1197 (2003). PMID: 15242284 [PubMed - indexed for MEDLINE].
7. Milestones in the genetical research on rhizobia. **G.S.Randhawa** & A.Kumar. **Indian J. Exp. Biol.** 41: 1095-1100 (2003). PMID: 15242275 [PubMed - indexed for MEDLINE].
8. Preface to the Special Issue on "Bacterium-plant Symbiosis".**G.S.Randhawa** & G.B.Kiss. **Indian J. Exp. Biol.** 41: 1091-1092 (2003).
9. 5<sup>th</sup> European Nitrogen Fixation Conference- A Report. **G.S. Randhawa.** **Indian J. Exp. Biol.** 40: 1321 (2002). PMID: 13677639 [PubMed - indexed for MEDLINE].
10. Role of biosynthetic pathways of amino acids, nucleotide bases and vitamins in symbiosis (Review Article). **G.S. Randhawa** & Raad Hassani. **Indian J. Exp. Biol.** 40: 755-764 (2002). PMID: 12597544 [PubMed - indexed for MEDLINE].  
**Citatations in journals : 13**
11. Antiquity of life. **G.S. Randhawa.** **Everyday Science.** 22: 23-25 (1977).

### c) Articles in books:

1. Guar : An industrial crop from marginal farms. N. A. Kuravadi, S. Verma, S. Pareek, P. Gahlot, S. Kumari, U. K. Tanwar, P. Bhatele, M. Choudhary, K. S. Gill, V. Pruthi, S. K. Tripathi, K. S. Dhugga & **G. S. Randhawa.** In : G. S. Bhullar & N. K. Bhullar (eds.). *Agricultural Sustainability : Progress and Prospects in Crop Research*; Elsevier, Amsterdam; pp. 47-60 (2013).
2. Milestones in gene and genome research. **G. S. Randhawa** & D. P. Panigrahi. In : V. Sharma & B. N. Tripathi (eds.). *Molecular Biology and Biotechnology: Selected Contributions of International Conference-2008*; LAP Lambert Academic Publishing, Saarbruecken, Germany; pp.194-210 (2011).
3. High resolution radiation hybrid mapping in wheat : an essential tool for the construction of the wheat physical maps. M. Michalak, A. Kumar, O. Riera-Lizarazu, Y. Gu, E. Paux, F. Choulet, C. Feuillet, S. Kumar, A. Goyal, V. Tiwari, M. Dogramaci, J. Hegstad, A. Peckrul, I. Kalavacharla, K. Hossain, H. S. Balyan, H. S. Dhaliwal, P. K. Gupta, **G. S. Randhawa**, S. S. Man & S. F.Kianian. In : R. Appels, R. Eastwood, E. Lagudah, P. Langridge, M. Mackay, L. McIntyre & P. Sharp (eds.). *Proceedings of the 11<sup>th</sup> International Wheat Genetics Symposium 24-29 August, 2008, Brisbane, Australia, Vol. 1, Sydney University Press, pp. 64-66 (2008).*
4. Evaluation and Utilization of *Aegilops* germplasm for biofortification of wheat for high grain iron and zinc content. V. K. Tiwari, N. Rawat, N. Singh, **G. S. Randhawa**, K. Singh, P. Chhuneja, S. K. Tripathi & H. S. Dhaliwal. In : R. Appels, R. Eastwood, E. Lagudah, P. Langridge, M. Mackay, L. McIntyre & P. Sharp (eds.). *Proceedings of the 11<sup>th</sup> International Wheat Genetics Symposium 24-29 August, 2008, Brisbane, Australia, Vol. 1, Sydney University Press, pp. 306-308 (2008).*
5. Biofortification of cereals for enhanced iron and zinc micronutrients and their bioavailability to overcome hidden hunger. H. S. Dhaliwal, V. K. Tiwari, N. Rawat, K. N. Singh and **G. S. Randhawa.** In: P. C. Trivedi (ed.). *Plant Biotechnology: Perspectives and Prospects : Festschrift in Honour of Prof. C. P. Malik.* Pointer, Jaipur (2006).
6. Plasmid curing by heat treatment from *Azospirillum brasilense* Sp7. **G.S. Randhawa.** *Current Status of Biological Nitrogen Fixation Research*; Department of Atomic Energy, Govt. of India and HAU Hisar, p: 16 (1986).

7. Role of *Rhizobium* plasmids in nitrogen fixation. **GS Randhawa**. In: R. Singh, H.S. Nainawatee & S.K. Sawhney (eds). Current Status of Biological Nitrogen Fixation Research; Department of Atomic Energy, Govt. of India and HAU Hisar. pp: 4-8 (1986).
8. Genetic studies of biological nitrogen fixation in peas (*Pisum sativum* L.). S. Singh, B.S. Ghai & **GS Randhawa**. In: BS Ghai (ed). Symbiotic Nitrogen Fixation (I); USG Publishers, Ludhiana. pp: 69-77 (1984).
9. Analysis of symbiotic nitrogen fixation genes carried by *Rhizobium meliloti* megaplasmid. A. Kondorosi, E. Kondorosi, Z. Banfalvi, W.J. Broughton, C. Pankhurst, **G.S. Randhawa**, C.H. Wong & J. Schell. In: A Pühler (ed). Molecular Genetics of the Bacteria-plant Interaction; Springer Verlag, Berlin, Heidelberg, New York. pp: 53-63 (1983).
10. Localization and molecular genetic analysis of symbiotic nitrogen fixation genes in *Rhizobium meliloti*. A. Kondorosi, Z. Banfalvi, W.J. Broughton, G.B. Kiss, E. Kondorosi, C. Pankhurst, **G.S. Randhawa** & Z. Svab & E. Vincze. In: O. Ciferri and L. Dure (eds). Structure and Function of Plant Genomes; Plenum Pub. Corp., pp: 247-252 (1983).
11. Genetical strategies for improving symbiotic nitrogen fixation by *Rhizobium*. B.S. Ghai & **G.S. Randhawa**. Proceedings of the Symposium on Genetics Applied to Human Needs; BARC, Mumbai. pp: 223-232. Jan 10-11 (1977).