

CURRICULUM VITAE

SARVAJEET SINGH GILL

[M.Sc (Gold Medal, AMU), M.Phil., Ph.D (AMU), Post Doc (ICGEB)]

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Areas of Research Interest

Abiotic Stress Tolerance, Reactive Oxygen Species Signaling and Antioxidant Machinery in Plants, Gene Expression, Helicases, Crop Improvement, Transgenics, Nitrogen & Sulfur Metabolism, Plant Fungal Symbiotic Interactions

Description of Research

Increasing crop production is now the highest agricultural priority because of increasing world population & changing climatic conditions. Abiotic stresses are the primary causes of crop loss worldwide. The main area of research includes Genetic Engineering, Stress Physiology and Molecular Biology (Development of abiotic stress tolerant crop plants, the physiological, biochemical and molecular characterization of agronomically important plants under abiotic stress factors, involvement of mineral nutrients and other biotechnological approaches in the amelioration of abiotic stress effects in crop plants, use of a combination of genetic, biochemical, genomic and proteomic approaches to understand the responses of various components of antioxidant machinery to abiotic stress and stress signaling and stress tolerance in crop plants. Research is undertaken to understand the mechanism of abiotic stress tolerance (heavy metal/salinity/drought) in plants (*Brassica juncea*, *Triticum aestivum*, *Lepidium sativum*, *Oryza sativa* & model plants like *Nicotiana tabaccum* and *Arabidopsis thaliana* etc) at physiological and molecular level by studying the response of the components of antioxidant machinery, photosynthetic, nitrogen & sulfur metabolic pathways. Detailed account of reactive oxygen species (ROS) and antioxidant machinery in crop plants has been presented (Plant Physiology and Biochemistry 48(2010): 909-930). It is also presented that Cd at high dose perturbs growth, photosynthesis and nitrogen metabolism while at low dose it up regulates sulfur assimilation and antioxidant machinery in garden cress (Plant Science 182(2012), 112-120). Research is also undertaken for the development of abiotic stress (heavy metal/high salinity/drought/cold) tolerant crops including rice by transgenic approach. Together with Dr. Narendra Tuteja (ICGEB, New Delhi) work on plant helicases for abiotic stress tolerance is going on. The mechanism of stress tolerance by PDH45 in Rice has been explored. A novel function of plant MCM6 in salinity stress tolerance has also been discovered that will help to improve crop production at sub-optimal conditions (Plant Molecular Biology 76(2011): 19-34 & 2014). Salinity tolerant tobacco and rice plants have been developed, without affecting the overall yield. This research uncovers new pathways to plant abiotic stress tolerance and indicates the potential for improving crop production at sub-optimal conditions.

EDUCATIONAL QUALIFICATIONS:

S. No.	Degree	University	Year	Subjects	Percentage
1.	Post-Doc	ICGEB	2008-2010	Genetic Engineering	--
2.	Ph.D	AMU., Aligarh	2008	Botany (Stress Physiology)	Awarded
3.	M.Phil	AMU., Aligarh	2003	Botany (Stress Physiology)	80.0%
4.	M.Sc	AMU., Aligarh	2001	Botany (Stress Physiology)	75.25% (GOLD MEDAL)
5.	B.Sc	CSJM, Kanpur University	1998	Botany, Chemistry, Zoology	75.2%

PROFESSIONAL RECOGNITION, AWARDS, FELLOWSHIPS, TRAINING RECEIVED:

- ✓ Editorial Board Member-Biochemistry & Molecular Biology Journal (2016)
- ✓ <http://biochem-molbio.imedpub.com/editors.php>
- ✓ Editorial Board Member-Journal of Advanced Research in Agriculture Science & Technology (2016)
<http://science.adrpublications.com/index.php/JoARAST/about/editorialTeam>
- ✓ Editorial Board Member-Journal of Advanced Research in Bioscience and Biotechnology (2016)
<http://science.adrpublications.com/index.php/JoARBSBT/about/editorialTeam>
- ✓ Guest Editor, Special issue: Functional Genomics Approaches to Decipher Plant Resilience to Environmental Stresses (International Journal of Plant Genomics)
<http://www.hindawi.com/journals/ijpg/si/375937/cfp/>
- ✓ Associate Editor, Frontiers in Plant Science, Section-Plant Physiology (Topic Title: Recent insights into the double role of hydrogen peroxide in plants)
<http://www.frontiersin.org/Journal/SpecialTopics/ViewTopicDetails.aspx?SRID=11>
- ✓ Associate Editor, Frontiers in Plant Science, Section-Crop Science and Horticulture (Topic Title: The Brassicaceae - agri-horticultural and environmental perspectives)
<http://www.frontiersin.org/Journal/SpecialTopics/ViewTopicDetails.aspx?SRID=11>
- ✓ Associate Editor, Frontiers in Plant Science, Section-Environmental Toxicology (Topic Title: Phytotoxicity of high and low levels of plant-beneficial heavy metal ions)
<http://www.frontiersin.org/Journal/SpecialTopics/ViewTopicDetails.aspx?SRID=11>
- ✓ Guest Editor of BioMed Research International Special Issue (Plant Stress & Biotechnology) <http://www.hindawi.com/journals/bmri/si/797210/>
- ✓ Routine reviewer of Plant Signaling and Behaviour, Journal of Plant Growth Regulation, Gene, Physiologia Plantarum, Annals of Botany, Chemosphere, Ecotoxicology, Environmental Science and Pollution Research, International Journal of Phytoremediation, Journal of Plant Nutrition and Soil Science, Ecotoxicology & Environmental Safety, Plant Physiology and Biochemistry, Protoplasma, Australian Journal of Crop Science, Molecular Biology Reports, PloS One, Annals of Botany, Environmental Science & Pollution Research, Frontiers in Plant Science, Nature Scientific Reports etc.
- ✓ Reviewer of International Grants
SDE/GWIS Fellowship, USA (Graduate Women in Science Fellowships)
GACR, Czech Science Foundation Grant (Project ID 13-15229S)

Agency/Organization which gave the award/fellowship	Award/fellowship	Nature of the award
Department of Science & Technology (DST), Govt. of India	Young Scientist Award-(2014-2017)	Research
National Environmental Science Academy, New Delhi	Junior Scientist of the year Award-2008	Recognition of Scientific Contribution
Aligarh Muslim University, Aligarh	Gold Medal	Gold Medal for standing First class First in the M.Sc. Exam
CSIR, New Delhi	Senior Research Fellowship	Research
Research Associate	ICGEB, New Delhi	Research
Senior Research Fellow	ICGEB, New Delhi	Research
Senior Research Fellow (Extended)	CSIR/A.M.U., Aligarh	Research
Senior Research Fellow	CSIR/A.M.U., Aligarh	Research
University Fellowship (SRF)	A.M.U., Aligarh	Research
University Fellowship (JRF)	A.M.U., Aligarh	Research

Teaching Activity

Teaching M.Sc. Agriculture Biotechnology and M.Sc. Biotechnology

M.Sc/Ph.D students guided	
Ph.D students	02 registered
M.Sc Dissertation	35 (Guided)
Project Students	08 (Guided)

Details of Projects being implemented/completed as principal investigator/along with its silent features

S. No.	Project title	Funding agency	Status	Silent feature
1.	Development of salinity and/or drought stress tolerant Indian mustard (<i>Brassica juncea</i> L.) plants by overexpression of p68 (Ddx5) RNA helicase gene (38(1360)/13/EMR-II)	CSIR, New Delhi	Completed	Overexpression of p68 (Ddx5) RNA helicase gene in <i>B. juncea</i> for salinity and/or drought tolerance
2.	A symbiotic approach for the improvement of salt tolerance of mustard (<i>Brassica juncea</i> L.) through <i>Piriformospora indica</i> : Role of antioxidant machinery (41-510/2012(SR))	UGC, New Delhi	Completed	<i>Piriformospora indica</i> led salinity stress tolerance in <i>B. juncea</i>
3.	Salt induced oxidative stress tolerance of rice (<i>Oryza sativa</i> L.) cultivars differing in tolerance potential by the root endophyte <i>Piriformospora indica</i> : Significance of ascorbate-glutathione pathway (SB/YS/LS-276/2013)	DST, New Delhi	On going	<i>P. indica</i> amelioration of salt induced oxidative stress in Rice

LIST OF PUBLICATIONS

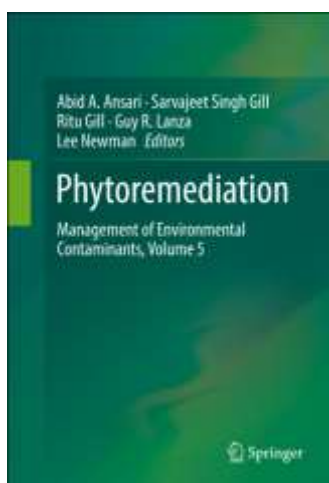
BOOKS PUBLISHED



Prasad R, Gill SS, Tuteja N (2018) *Crop Improvement through Microbial Biotechnology*. Elsevier B.V. USA ISBN: 978-0-444-63987-5

<https://www.sciencedirect.com/science/book/9780444639875>

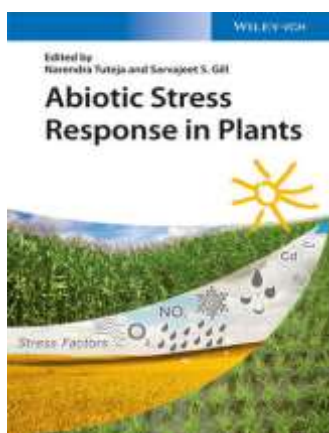
Crop Improvement through Microbial Biotechnology explains how certain techniques can be used to manipulate plant growth and development, focusing on the cross-kingdom transfer of genes to incorporate novel phenotypes in plants, including the utilization of microbes at every step, from cloning and characterization, to the production of a genetically engineered plant. This book covers microbial biotechnology in sustainable agriculture, aiming to improve crop productivity under stress conditions.



Ansari AA, Gill SS, Lanza GR, Newman L (2017) *Phytoremediation Management of Environmental Contaminants, Volume 5*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN 978-3-319-52381-1

<http://www.springer.com/gp/book/9783319523798>

This text details the plant-assisted remediation method, “phytoremediation”, which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Many chapters highlight and compare the efficiency and economic advantages of phytoremediation to currently practiced soil and water treatment practices.

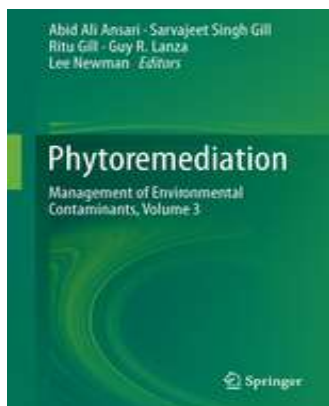


Tuteja N, Gill SS (2016) *Abiotic Stress Response in Plants*, Wiley-VCH Verlag GmbH & Co. Weinheim, Germany ISBN 978-3-527-33918-1

<http://as.wiley.com/WileyCDA/WileyTitle/productCd-3527339183.html>

Understanding abiotic stress responses in plants is critical for the development of new varieties of crops, which are better adapted to harsh climate conditions. The new book by the well-known editor team Narendra Tuteja and Sarvajeet Gill provides a comprehensive overview on the molecular basis of plant responses to external stress like drought or heavy metals, to aid in the engineering of stress resistant crops.

After a general introduction into the topic, the following sections deal with specific signaling pathways mediating plant stress response. The last part covers translational plant physiology, describing several examples of the development of more stress-resistant crop varieties.

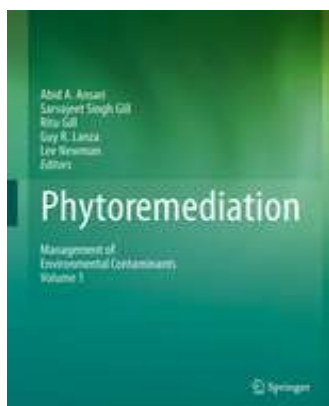


Ansari AA, Gill SS, Lanza GR, Newman L (2016) *Phytoremediation Management of Environmental Contaminants, Volume 3*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN 978-3-319-40148-5

<http://www.springer.com/us/book/9783319401461>

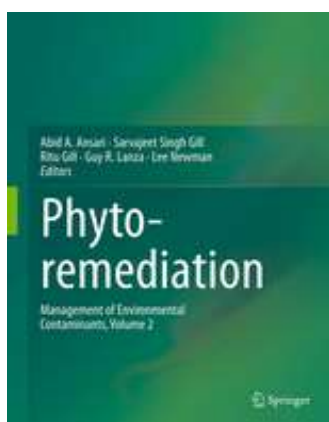
This book details the plant-assisted remediation method, “phytoremediation”, which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Each chapter highlights and

compares the beneficial and economical alternatives of phytoremediation to currently practiced soil removal and burial practices.



Ansari AA, Gill SS, Gill R, Lanza GR, Newman L (2015) *Phytoremediation Management of Environmental Contaminants, Volume 1*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN: 978-3-319-10968-8 <http://www.springer.com/in/book/9783319109688>

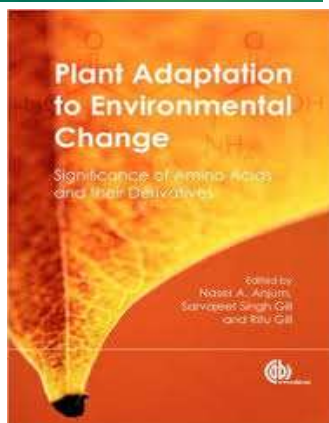
This book covers state of the art approaches in Phytoremediation written by leading and eminent scientists from around the globe. Phytoremediation: Management of Environmental Contaminants, Volume 1 supplies its readers with a multidisciplinary understanding in the principal and practical approaches of phytoremediation from laboratory research to field application.



Ansari AA, Gill SS, Gill R, Lanza GR, Newman L (2015) *Phytoremediation Management of Environmental Contaminants, Volume 2*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN: 978-3-319-10394-5 (Print) 978-3-319-10395-2 (Online)

<http://link.springer.com/book/10.1007/978-3-319-10395-2>

This text details the plant-assisted remediation method, “phytoremediation”, which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Each chapter highlights and compares the beneficial and economical alternatives of phytoremediation to currently practiced soil removal and burial practices.



Anjum NA, Gill SS, Gill R (2014) *Plant Adaptation to environmental Change: Significance of Amino Acids and their derivative*. CABI International, UK ISBN: 9781780642734

<http://www.cabi.org/bookshop/book/9781780642734>

Plants constantly cope with unfavourable ecosystem conditions, which often prevent them reaching their full genetic potential in terms of growth, development and productivity. This book covers plants' responses to these environmental changes, namely, the modulation of amino acids, peptides and amines to combat both biotic and abiotic stress factors. Bringing together the most recent developments, this book is an important resource for researchers and students of crop stress and plant physiology.

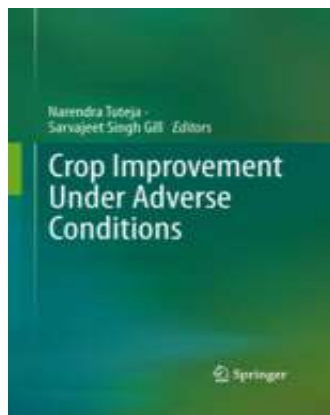


Tuteja N, Gill SS (2013) *Climate Change and Plant Abiotic Stress Tolerance (Volume 1 & 2)*. Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany ISBN 978-3-527-33491-9

<http://as.wiley.com/WileyCDA/WileyTitle/productCd-3527334912.html>

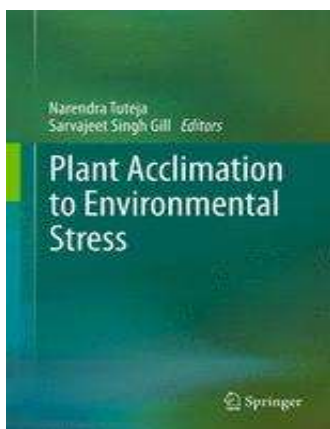
In this ready reference, a global team of experts comprehensively cover molecular and cell biology-based approaches to the impact of increasing global temperatures on crop productivity.

The work is divided into four parts. Following an introduction to the general challenges for agriculture around the globe due to climate change, part two discusses how the resulting increase of abiotic stress factors can be dealt with.



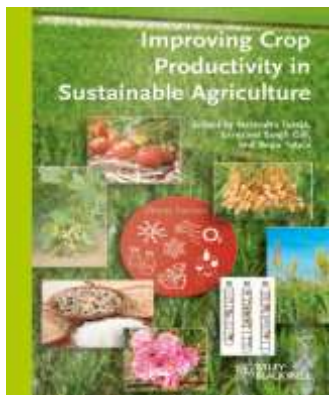
Tuteja N, Gill SS (2013) *Crop Improvement under Adverse Conditions*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN 978-1-4614-4632-3
<http://www.springer.com/la/book/9781461446323>

Crop Improvement under Adverse Conditions will serve as a cutting-edge resource for researchers and students alike who are studying plant abiotic stress tolerance and crop improvement. The book presents the latest trends and developments in the field, including the impact of extreme events on salt tolerant forest species of Andaman & Nicobar Islands, the overlapping horizons of salicylic acid in different stresses, and fast and reliable approaches to crop improvement through In Vitro haploid production.



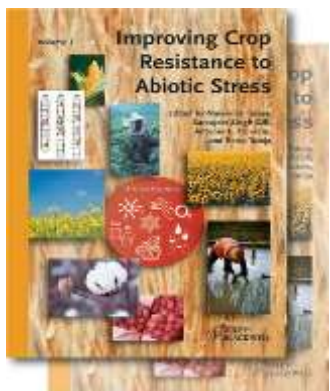
Tuteja N, Gill SS (2013) *Plant Acclimation to Abiotic Stress*. Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA ISBN 978-1-4614-5000-9
<http://link.springer.com/book/10.1007%2F978-1-4614-5001-6>

The mechanisms underlying endurance and adaptation to environmental stress factors in plants have long been the focus of intense research. Plants overcome environmental stresses by development of tolerance, resistance or avoidance mechanisms, adjusting to a gradual change in its environment which allows them to maintain performance across a range of adverse environmental conditions. Plant Acclimation to Environmental Stress presents the latest ideas and trends on induced acclimation of plants to environmental stresses under changing environment. Written by experts around the globe, this volume adds new dimensions in the field of plant acclimation to abiotic stress factors. Comprehensive and lavishly illustrated.



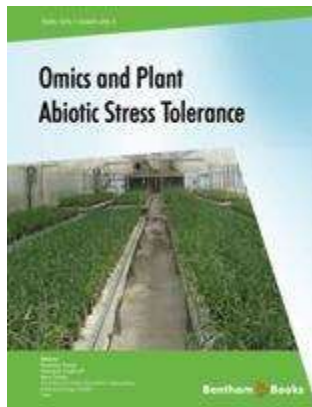
Tuteja N, Gill SS, Tuteja R (2013) *Improving Crop Productivity in Sustainable Agriculture*. Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany ISBN: 978-3-527-33242-7
<http://as.wiley.com/WileyCDA/WileyTitle/productCd-3527332421.html>

An up-to-date overview of current progress in improving crop quality and quantity using modern methods. With a particular emphasis on genetic engineering, this text focuses on crop improvement under adverse conditions, paying special attention to such staple crops as rice, maize, and pulses. It includes an excellent mix of specific examples, such as the creation of nutritionally-fortified rice and a discussion of the political and economic implications of genetically engineered food.



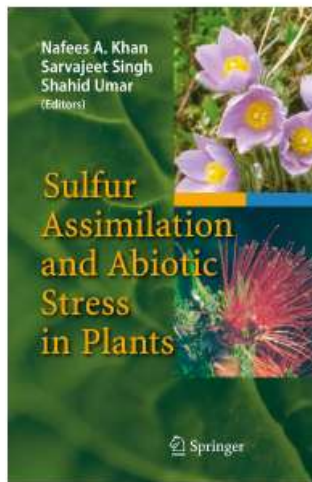
Tuteja N, Gill SS, Tiburcio AF, Tuteja R (2011) *Improving Crop Resistance to Abiotic Stress* (Vol I & II). Wiley Wiley-VCH Verlag GmbH & Co. Weinheim, Germany ISBN: 978-3-527-32840-6
<http://as.wiley.com/WileyCDA/WileyTitle/productCd-3527328408.html>

The latest update on improving crop resistance to abiotic stress using the advanced key methods of proteomics, genomics and metabolomics. The well balanced international mix of contributors from industry and academia cover work carried out on individual crop plants, while also including studies of model organisms that can then be applied to specific crop plants.



Tuteja N, Gill SS, Tuteja R (2011) *Omics and Plant Abiotic Stress Tolerance*. Bentham Science Publishers, UAE & USA eISBN: 978-1-60805-058-1
<http://ebooks.benthamscience.com/book/9781608050581/>

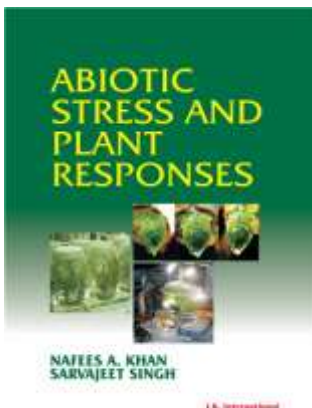
The text in this book deals with the importance of -omics approaches like Genomics, Metabolomics and Proteomics in abiotic stress tolerance. Large scale analytical approaches provide detailed information about the structure and complexity of signaling networks, identify subsets of genes or activities that are correlated to given stress factors and reveal unexpected or previously uncharacterized biochemical interactions.



Khan NA, Singh S and Umar S (2008) *Sulfur Assimilation and Abiotic Stress in Plants*. Springer-Verlag, New York ISBN 978-3-540-76325-3
<http://link.springer.com/book/10.1007%2F978-3-540-76326-0>

Sulfur is one of the four major essential elements necessary for the plant life cycle. Its assimilation in higher plants and its reduction in metabolically important sulfur compounds are crucial factors determining plant growth and vigor and resistance to stresses. The range of biological compounds that contain sulfur is wide. The information on sulfur assimilation can be exploited in tailoring for efficient sulfur utilization, and in the applied approaches for the sustenance of agricultural productivity through nutritional improvement and increased stress tolerance.

The present book discusses the aspects of sustainable crop production with sulfur, the importance of sulfur metabolites and sulfur metabolizing enzymes in abiotic stress management in plants.



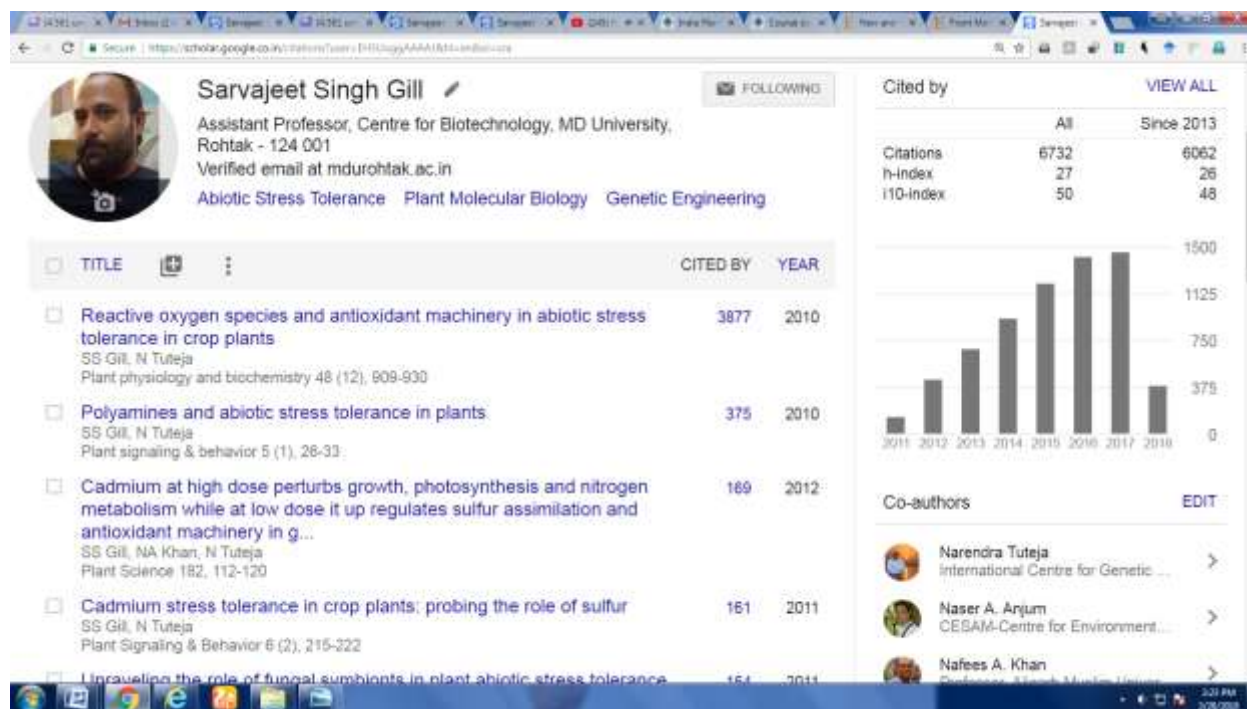
Khan NA and Singh S (2008) *Abiotic Stress and Plant Responses*. IK. International Publishing House, New Delhi, India ISBN: 978-818-986695-2
<https://www.ikbooks.com/books/book/life-sciences/botany/abiotic-stress-plant-responses/9788189866952/>

In this present book the advances in the area of abiotic stress responses and stress management have been included. The information may be useful in elucidating limits and tolerance of a plant to abiotic stress.

The present volume, comprising seventeen chapters by outstanding and eminent specialists across the world, covers the information on abiotic stresses such as salinity, heavy metals, drought and herbicides.

RESEARCH PUBLICATION (Selected)

Highly cited articles



1. Kundu P, Gill R, Ahlawat S, Anjum NA, Sharma KK, Ansari AA, Hasanuzzaman M, Ramakrishna A, Chauhan NS, Tuteja N, Gill SS (2018) Targeting redox regulatory mechanisms for Abiotic stress tolerance in plants, In: Biochemical, Physiological and molecular avenues for combating abiotic stress tolerance in plants, Wani S (Ed.), Elsevier, Academic Press, USA, pp. 1-68
2. Banerjee S, Sirohi A, Ansari AA, Gill SS (2017) Role of small RNAs in abiotic stress responses in plants. *Plant Gene* (In Press) <https://doi.org/10.1016/j.plgene.2017.04.005>
3. Garg B, Gill SS, Biswas DK, Sahoo RK, Kunchge NS, Tuteja R, Tuteja N (2017) Simultaneous Expression of PDH45 with EPSPS Gene Improves Salinity and Herbicide Tolerance in Transgenic Tobacco Plants. *Front Plant Sci.* 24;8:364. **(SCI IF: 4.5)**
4. Banerjee S, Banerjee A, Gill SS, Gupta OP, Dahuja A, Jain PK, Sirohi A (2017) RNA Interference: A Novel Source of Resistance to Combat Plant Parasitic Nematodes. *Front Plant Sci.* 19;8:834. **(SCI IF: 4.5)**
5. Banerjee S, Gill SS, Jain PK, Sirohi A (2017) Isolation, cloning, and characterization of a cuticle collagen gene, Mi-col-5, in *Meloidogyne incognita*. *3 Biotech.* 7(1):64. **(SCI IF: 1.0)**
6. Kumar A, Singh D, Sharma KK, Arora S, Singh AK, Gill SS, Singhal B (2017) Gel-Based Purification and Biochemical Study of Laccase Isozymes from *Ganoderma* sp. and Its Role in Enhanced Cotton Callogenesis. *Front. Microbiol.* 20;8:674. **(SCI IF: 4.2)**
7. Gill SS, Gill R, Trivedi DK, Anjum NA, Sharma KK, Ansari MW, Johri AK, Prasad R, Pereira E, Varma A, Tuteja N (2016) *Piriformospora indica*: potential and significance in plant stress tolerance. *Front. Microbiol.* doi: 10.3389/fmicb.2016.00332 **(SCI Impact Factor: 4.2)**
8. Trivedi DK, Gill SS, Bhavesh NS, Kumar A, Tuteja N (2016) Cyclophilin: A versatile chaperone of biological system. *Biochemistry & Molecular Biology Journal* 1(1:9) 1-3.
9. Nath M, Bhatt D, Prasad R, Gill SS, Anjum NA, Tuteja N (2016) Reactive oxygen species (ROS) generation-scavenging and signaling during plant-mycorrhizal interaction under stress condition. *Front. Plant Sci.* (Accepted) **(SCI Impact Factor: 4.6)**
10. Anjum NA, Sharma P, Gill SS, Hasanuzzaman M, Mohamed AA, Thangavel P, Devi GD, Vasudhevan P, Sofo A, Misra AN, Singh HP, Pereira E, Tuteja N (2016) Catalase and ascorbate peroxidase - representative H₂O₂-detoxifying haeme enzymes in plants. *Environmental Science and Pollution Research* (Accepted) **(SCI Impact Factor: 2.76)**

11. Yadav S, Gill SS, Passricha N, Anjum NA, Tuteja N (2016) Genome-wide analysis and transcriptional expression pattern-assessment of superoxide dismutase in rice and Arabidopsis under abiotic stresses. *Biologia Plantarum* (Accepted) **(SCI Impact Factor: 1.8)**
12. Raikwar S, Shrivastava VK, Gill SS, Tuteja R, Tuteja N (2015) Emerging Importance of Helicases in Plant Stress Tolerance: Characterization of *Oryza sativa* Repair Helicase XPB2 Promoter and Its Functional Validation in Tobacco under Multiple Stresses. *Front. Plant Sci.* 16; 6:1094. doi: 10.3389/fpls.2015.01094. **(SCI Impact Factor: 4.6)**
13. Gill SS, Anjum NA, Gill R, Yadav S, Hasanuzzaman M, Fujita M, Mishra P, Sabat SC, Tuteja N (2015) Superoxide dismutase - mentor of abiotic stress tolerance in crop plants. *Environmental Science and Pollution Research* 04/2015 **(SCI Impact Factor: 2.76)**
14. Sirhindi G, Mir MA, Sharma P, Gill SS, Kaur H, Mushtaq R (2015) Modulatory role of jasmonic acid on photosynthetic pigments, antioxidants and stress markers of *Glycine max* L. under nickel stress. *Physiol Mol Biol Plants.* 21(4):559-65. doi: 10.1007/s12298-015-0320-4.
15. Chahar P, Kaushik M, Gill SS, Gakhar SK, Gopalan N, Datt M, Sharma A, Gill R (2015) Genome-wide collation of the *Plasmodium falciparum* WDR protein superfamily reveals malarial parasite-specific features. *PloS One* (Accepted) **(SCI Impact Factor: 3.6)**
16. Anjum NA, Gill R, Kaushik M, Hasanuzzaman M, Pereira E, Ahmad I, Tuteja N, Gill SS (2015) ATP-sulfurylase, sulfur-compounds and plant stress tolerance. *Frontiers in Plant Science* 03/2015; 6(210). **(SCI Impact Factor: 3.64)**
17. Anjum NA, Sofo A, Scopa A, Roychoudhury A, Gill SS, Iqbal M, Lukatkin AS, Pereira E, Duarte AC, Ahmad I (2015) Lipids and proteins-major targets of oxidative modifications in abiotic stressed plants. *Environ Sci Pollut Res Int.* 2014 Dec 5. [Epub ahead of print] **(SCI Impact Factor: 2.757)**
18. Garg B, Biswas DK, Sahoo RK, Gill SS, Kunchge NK, Tuteja R, Tuteja N (2015) Pyramiding of PDH45 with EPSPS gene promotes salinity and herbicide tolerance and synergistic effect of jasmonate and salicylic acid dependent pathways for salinity tolerance. *Environ Sci Pollut Res Int.* (Accepted) **(SCI Impact Factor: 2.757)**
19. Gill SS, Anjum NA, Gill R, Jha M, Tuteja N (2014) DNA damage and repair in plants under ultraviolet and ionizing radiations. *The Scientific World Journal* Article ID 250158
20. Shukla D, Huda KMK, Banu MSA, Gill SS, R Tuteja, N Tuteja (2014) OsACA6, a P-type 2B Ca²⁺ ATPase functions in cadmium stress tolerance in tobacco by reducing the oxidative stress load. *Planta* DOI 10.1007/s00425-014-2133-z **(SCI Impact Factor: 3.376)**
21. Anjum NA, Gill SS, Gill R, Hasanuzzaman M, Duarte AC, Pereira E, Ahmad I, Tuteja R, Tuteja N. (2014) Metal/metalloid stress tolerance in plants: role of ascorbate, its redox couple, and associated enzymes. *Protoplasma.* 2014 Mar 29. [Epub ahead of print] **(SCI Impact Factor: 3.171)**
22. Tuteja N, Banu MSA, Huda KMK, Gill SS, Jain P, Pham XH, Tuteja R (2014) Pea p68, a DEAD-Box Helicase, Provides Salinity Stress Tolerance in Transgenic Tobacco by Reducing Oxidative Stress and Improving Photosynthesis Machinery. *PLoS ONE* 9(5): e98287. **(SCI Impact Factor: 3.534)**
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