

## BIO-DATA

**Name** : Dr. JOGINDER SINGH DUHAN  
**Father's name** : Sh. Fateh Singh  
**Date of birth** : February 01, 1968  
**Category** : General  
**Nationality** : Indian  
**Marital status** : Married  
**Permanent address** : Dr. Joginder Singh Duhan S/o Sh. Fateh Singh  
 Vill & P.O. Prem Nagar, Teh. & Distt.  
 Bhiwani-127031 (Haryana) India.  
**Postal address** : Dr. Joginder Singh Duhan  
 H.No. E-12, University Campus  
 Ch. Devi Lal University, Sirsa-125055  
 Ph.no. 9416725009  
 E mail: duhanjs68@gmail.com; duhanjs@rediffmail.com



**Present Status** : Chairperson, Dept. of Zoology,  
 Professor, Dept. of Biotechnology,  
 Ch. Devi Lal University, Sirsa-125505

**Academic qualifications** : M.Sc., B.Ed., Ph.D., NET

Exam./Degree	Board/University	Year	% of marks	Division	Subjects
Hr. Secondary	BSEH, Bhiwani	1985	60.70	1 <sup>st</sup>	Hindi, Eng., Phys. Chem. & Biology
B.Sc.	MDU, Rohtak	1988	64.42	1 <sup>st</sup>	Botany, Zoology & Chemistry
B.Ed.	MDU, Rohtak	1989	54.00	2 <sup>nd</sup>	Maths., Physical Science & all compulsory subjects
M.Sc.	CCS HAU, Hisar	1992	79.20 (3.46/4.00)	1 <sup>st</sup>	Major-Microbiology Minor-Biochemistry
Ph.D.	CCS HAU, Hisar	1997	84.20 (3.71/4.00)	1 <sup>st</sup>	Major-Microbiology Minor-Biochemistry
NET	ASRB PUSA, New Delhi	1997 & 2002			Microbiology

**Field of specialisation** : Microbial biotechnology, BNF and nanotechnology

**Title of research during M.Sc** : Effect of allelopathic rhizosphere of *Acacia nilotica* on *Azotobacter chroococcum* and *Rhizobium cowpea*.

**Ph.D** : Siderophore production and nodulation by *Bradyrhizobium/Rhizobium* strains infecting pigeonpea.

**Experiences** : Research - 06 years and 04 months 5 days excluding M.Sc. & Ph.D. research  
 : Teaching cum Research- 16 Years, 02 months

**Total research and teaching experience:** 22 years 06 months

Employer/Name of the organization	Post held	Period		Nature of duties
		From	To	
Vice-Chancellor, Ch. Devi Lal University, Sirsa-125505	Professor	04/09/2019	Continue	Teaching and Research
Vice-Chancellor, Ch. Devi Lal University, Sirsa-125505	Associate Professor	04/09/2016	03/09/2019	Teaching and Research
Vice-Chancellor, Ch. Devi Lal University, Sirsa-125505	Asstt. Professor Biotechnology AGP-8000/-	04/09/ 2013	03/09/2016	Teaching and Research
Vice-Chancellor, Ch. Devi Lal University, Sirsa-125505	Lecturer Biotechnology (Sr. scale)	04/09/ 2008	03/09/2013	Teaching and Research
Vice-Chancellor, Ch. Devi Lal University, Sirsa-125505	Lecturer Biotechnology	04/09/ 2004	03/09/2008	Teaching and Research

Director, N.B.D.C., Ministry of Agriculture, Govt. of India, CGO Complex-II, 204, B-wing, K.N. Nagar, Ghaziabad. Posted at RBDC, H. No. 149, sector 15 A, Hisar (Haryana).	Sr. Tech. Assistant	29/04/ 1998	03/09/ 2004	Training, Research and Production of Bio-fertilizers
Head, Dept. of Microbiology, COBS & H, CCS HAU, Hisar	Research Associate	25/06/ 1997	31/10/ 1997	Research & Development

#### Trainings/courses/workshop attended

Sr. no	Training/courses/ workshop	From	To	Organized by
1.	Computer appreciation course	25/05/1996	22/06/1996	Director, counseling and placement, CCS HAU, Hisar.
2.	Orientation course on quality control of biofertilizer	08/10/1997	09/10/1997	Regional Biofert. Dev. Centre, Ministry of Agric., GOI, 18, Sirsa Road, Hisar-125001.
3.	Operation productivity tools	24/07/2002	28/07/ 2002	Ministry of Information Technology NIC, Block A, CGO Complex, New Delhi. At RCC, Sector 17, Chandigarh.
4.	Database design & analysis under DACNET project	03/03/ 2003	07/03/ 2003	-do-
5.	Decision support system under DACNET project	24/03/ 2003	28/03/ 2003	-do-
6.	Orientation Course	24/05/ 2006	20/06/ 2006	U.G.C. ASC, KU, Kurukshetra
7.	Molecular diagnostic & animal tissue culture techniques	02/11/ 2006	22/11/ 2006	Dept of Animal Biotechnology, COVS CCSHAU, Hisar
8.	National Workshop on Research Methodology	02/03/ 2011	15/03/ 2011	Dept. of Computer Sciences & Application, CDLU, Sirsa
9.	Basic techniques in Biotechnology, Food Tech. and Bio-informatics	15/06/ 2011	28/06/ 2011	Dept. of Biotechnology & Food Sci. & Technology, CDLU, Sirsa
10.	National workshop on "Patent awareness: issues and challenges"	10/08/2011	-----	Dept. of Biotechnology, CDLU, Sirsa
11.	Techniques and tools of plant molecular biology	16/12 2011	22/12/ 2011	Centre for Plant Biotechnology, CCS HAU New Campus, Hisar-125004
12.	Sharpening research acumen through soft and statistical skills	23/02/2015	28/02/2015	UGC-Academic Staff College, GJUS&T, Hisar-125001
13.	Workshop on " Right to Information Act 2005"	05/02/2015	-----	Organized by Dept. of Public Administration in collaboration with HIPA, Gurgaon
14.	Workshop on " Patent Awareness"	08/03/2016	-----	Dept. of Biotechnology, CDLU, Sirsa
15.	Workshop on "Choice Based Credit System"	26/03/2016	-----	Ch. Devi Lal University, Sirsa
16.	Intellectual Property Rights	21/03/2017	-----	Faculty of Physical and Life Sciences, CDLU., Sirsa

#### Additional information's

##### a) Awards/ honours

- National level prestigious **Young Scientist Award** in Agriculture Microbiology for the year 2000 presented by Association of Microbiologist of India in its 41<sup>st</sup> Annual Conference of AMI held on Nov. 25-27, 2000 at Birla Institute of Scientific Research, Statue Circle, Jaipur, India.
- **K.K. Nanda Award** for the best research paper entitled "Influence of adenine sulphate on *in vitro* shoot proliferation of banana cultivar Robusta" presented by Chaudhary D. Kajla S. **Duhan J.S.** and Kumar A. in Zonal Seminar on Abiotic Stress Tolerance in Plants- Physiological and Biotechnological approaches held on 5<sup>th</sup> Dec. 2009 organized by Centre for Plant Biotechnology CCS HAU, New Campus, Hisar.
- **Best Paper Presentation (poster) Award (first position)** in the theme area of Biosensor & Nanotechnology on the research paper entitled "Ascorbate oxidase based reusable PVC strip for biochemical analysis of ascorbic acid in samples." by Anjum Gahlaut, Ashish Gothwal, Vikas Dhull, **J.S. Duhan** and Vikas Hooda In "International Conference on Biotechnology: emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, Chaudhary Devi Lal University, Sirsa (India) on Sept. 18-20, 2012.
- **Best Paper Presentation (poster) Award (second position)** in the theme area of Animal Biotechnology on the research paper entitled "Buffalo umbilical cord matrix cells exhibit multilineage differentiation potential *in vitro*" by Jarnail Singh. Anita Maan, D. Kumar, **J.S. Duhan** and P.S. Yadav In "International Conference on Biotechnology: emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, Chaudhary Devi Lal University, Sirsa (India) on Sept. 18-20, 2012.

- **Best Paper Presentation (poster) Award (third position)** in the theme area of Agricultural and Food Biotechnology on the research paper entitled "Bio-augmentation of phenolic and antioxidant activities of combination of rice and seim fermented with grass fungi. In "National Conference on Biotechnology: emerging Trends (ICB-2016)" organized by Dept. of Biotechnology, Chaudhary Devi Lal University, Sirsa (India) on Feb. 11-12, 2016.
- **Best Paper Presentation (poster) Award (second position)** on the research paper entitled "Fermentation approach on release of phenolic contents from peanut press cake with *Aspergillus oryzae*. In "National Conference on "New Horizons in Human Health & Nutrition" organized by School of Bioengineering and Food Technology, Shoolini University, Solan (HP) on 2-3 March, 2017.
- **Best Paper Presentation (poster) Award (first position)** on the research paper entitled "Biofortification ----- Fermentation. In "National Conference on Contemporary Food Processing and Preservation Technologies" organized by School of Bioengineering and Food Technology, Shoolini University, Solan-173229, H.P. (India) on April 12-13, 2018.
- **Distinction certificate** being the **Organizing secretary** of three days "International Conference on Biotechnology: Emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, CDLU, Sirsa from Sept. 18-20, 2012. Sirsa, given by the Vice-chancellor on foundation day of the University i.e. 3<sup>rd</sup> April 2017.
- **Felicitation certificate** being Co- PI of the project entitled "Development of easy and inexpensive Loop-mediated isothermal amplification (LAMP) kit for the detection of bacterial fish pathogens" from UGC, New Delhi completed in 2014, given by the Vice Chancellor, CDLU on its 2<sup>nd</sup> Foundation day held on 13<sup>th</sup> April, 2018.
- **Award of Honour** given by the University for Distinctive Contribution and Creation of New Knowledge and Enrichment of Academics and Research on 26<sup>th</sup> Jan. 2019.
- Senior Research Fellowship given by the Council of Scientific & Industrial Research, New Delhi during Ph.D. programme Qualified **National Eligibility Test (NET)** for **two times (i.e. in 1997 & 2002)** for lectureship/assistant professorship conducted by ASRB (ICAR), New Delhi.
- Certificate of merit for **second position** in Masters programme (Agric. Microbiology) in CCS, Haryana Agricultural University, Hisar.
- Scholarship on Haryana state merit basis in Hr. Secondary.

**b) Publications:** International - 79, National- 17

Sr. No.	Type	Published	Accepted	Communicated
1.	Research papers/ Review article/Chapter	91	-	03
2.	Book/manual	05	-	-
3.	Popular articles	06	-	-
4.	Radio talks	08	-	-

**c) Conferences/seminars/workshop organized:** International-01, National -07

**d) Conferences/seminars/workshop attended:** International-09, National -22

**e) Administrative experience**

- Secretary, Staff Council of Dept. of Biotechnology, CDLU., Sirsa.
- Incharge Department of Energy and Environmental Science from 23<sup>rd</sup> April to 31<sup>st</sup> Aug. 2007.
- Course Co-ordinator, M.Phil. Microbiology, UCDC of CDLU. Sirsa from 2006 to 2012.
- Course Co-ordinator M.Phil. Botany, UCDC of CDLU. Sirsa from 20/12/. 2007 to 2011.
- Secretary cum treasurer of Association of Microbiologist of India (AMI) Sirsa unit for 2010-11.

**f) Course curriculum development**

- M.Sc. course of Biotechnology, CDLU, Sirsa under annual system.
- M.Phil. course of Biotechnology (UCDC) of CDLU, Sirsa under annual system.
- M.Phil. course of Microbiology (UCDC) of CDLU, Sirsa under annual system
- M.Sc. course of Biotechnology, CDLU, Sirsa under semester system.
- M.Phil. course of Biotechnology, CDLU, Sirsa under semester system.
- Ph.D. course of Biotechnology, CDLU, Sirsa under semester system.
- M.Sc. course of Biotechnology, CDLU, Sirsa under CBCS system.
- M.Phil. course of Biotechnology, CDLU, Sirsa under CBCS system.
- Ph.D. course of Biotechnology, CDLU, Sirsa under CBCS system.

**g) Research activity:****i) Research guidance:**

M. Sc. : 45 students completed the research project for their degree

M. Phil. : 15 students completed

Ph. D. : 07 completed and 04 pursuing

**ii) Research Projects:**

Title of the Research Project	Investigators	Funding Agency, Amount & duration	Status
1. Siderophore production and nodulation by <i>Rhizobium</i> and <i>Bradyrhizobium</i> infecting pigeonpea ( <i>Cajanus cajan</i> ).	J.S. Duhan	CSIR, New Delhi	Completed
2. Development of easy and inexpensive Loop-mediated isothermal amplification (LAMP) kit for the detection of bacterial fish pathogens	S.K. Gahlawat and J.S. Duhan	UGC, New Delhi, 9,69,000/-	Completed

**h) Membership of societies/ associations:**

- Member of Academic Council of Ch. Devi Lal University, Sirsa from 20<sup>th</sup> Feb. 2008 to 19<sup>th</sup> Feb. 2010.
- Member Faculty of Life Science of Ch. Devi Lal University, Sirsa from 13/8/2012 to 12/8/14.
- Member of Post Graduate Board of Studies of Dept. of Biotechnology, CDLU., Sirsa from 2004 to 2006 and from 12<sup>th</sup> Dec. 2007 onward till date.
- Member of Departmental Research Committee, CDLU, Sirsa from 20<sup>th</sup> Feb. 2008 till date.
- Life member of The Indian Science Congress Association (No. L24203).
- Life member of Association of Microbiologist of India (AMI)(No. 272-1999).
- Life member of Society for Conservation of Domestic Animals Biodiversity (No. SOCDAB- 781).
- Life member Red Cross Society of India.
- Life member of Alumni Association of CCS Haryana Agricultural University, Hisar (HAA No. 0427).
- Life member of Youth Hostel Association (YHA) of India (027\_HAR-05-31805).

**List of publications****A. Research papers / review articles / books / manuals**

1. **Duhan J.S.**, Sharma P.K. and Lakshminarayana K. (1994). Allelopathic effect of *Acacia nilotica* on nodulation and nitrogen fixation by *Rhizobium* (cowpea). *Allelopathy J.* **1(1)**: 47-57. **IF: 1.275 NAAS: 6.53**
2. **Duhan J.S.** and Lakshminarayana K. (1995). Allopathic effect of *Acacia nilotica* on cereal and legume crops grown in fields. *Allelopathy J.* **2(1)**: 93-98. **IF: 1.275 NAAS: 6.53**
3. **Duhan J.S.**, Narula N. and Lakshminarayana K. (1996). Allelopathic effect of *Acacia nilotica* on survival and nitrogen fixation of *Azotobacter chroococcum*. In: Resource management in fragile environment (Eds. Dogra R.C., Behl R.K. and Khurana A.L.) CCS HAU, Hisar and Maxmullar Bhavan, New Delhi. pp 61-65.
4. Dudeja S.S., **Duhan J.S.** and Khurana A.L. (1996). Siderophore mediated iron acquisition in rhizobia under free living and symbiotic condition. In: Resource management in fragile environment (Eds. Behl R.K., Gupta A.P., Khurana A.L. and Singh A.). CCS HAU, Hisar and Maxmullar Bhavan, New Delhi, pp. 212-229.
5. **Duhan J.S.** and Dudeja S.S. (1998). Effect of elevated temperature on growth, siderophore production and survival of pigeonpea rhizobia. *Annals Agric. Bio-Research.* **3 (2)**: 235-238. **NAAS: 3.97**
6. **Duhan J.S.** and Dudeja S.S. (1998). Effect of exogenous iron, synthetic chelator and rhizobial siderophore on iron acquisition by pigeonpea host in pigeonpea- *Rhizobium* symbiosis. *Microbial Research.* **153**:37-45. **IF: 3.970 NAAS: 8.72**
7. **Duhan J.S.**, Dudeja S.S. and Khurana A.L. (1998). Siderophore production in relation to nitrogen fixation and iron uptake in pigeonpea-*Rhizobium* symbiosis. *Folia Microbiol.* **43 (4)**:421-426. **IF: 1.521 NAAS: 7.34**
8. **Duhan J.S.** and Dudeja S.S. (1999). Competitiveness does not correlate with siderophore production in *Rhizobium-Cajanus cajan* symbiosis. *Symbiosis.* **26**: 79-87. **IF: 2.009 NAAS: 7.28**
9. Singh T., Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999) Survival of rhizobia and level of contamination in charcoal and lignite. *Annals Biology.* **15(2)**: 155-158. **NAAS: 4.08**

10. Singh T., Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999). Fungicide and rhizobial interaction at different methods of inoculation in green gram. *Legume Research*. **22(3)**: 152-156. **IF: 0.116 NAAS: 6.15**
11. Singh T., Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999). A refresher courses manual on biofertilizer. Published by RBDC, Hisar, Ministry of Agriculture, Govt. of India.
12. Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (2001). Evaluation of suitable combination of carrier among lignite, charcoal and vermiculite for survival of rhizobia at different storage temperature under both sterile and non-sterile system of production. *Annals Biology*.**17 (1)**:101-105. **NAAS: 4.08**
13. Ghosh T.K., Singh R.P., **Duhan J.S.** and Yadav D.S. (2001). A review on quality control of biofertilizers in India. *Fertilizer Marketing News*. 32(8): 1-9.
14. Rustagi N., Sharma P.K., **Duhan J.S.** and Dogra R.C. (2003). Survival and efficiency of temperature tolerant and temperature sensitive strain of *Rhizobium* sp. (*Acacia*) under temperature stress conditions. *Indian J. Agroforestry* **5(1&2)**:75-79. **NAAS: 4.53**
15. Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (2003). Rhizobial compatibility against lethal doses of pesticides in green gram with different method of inoculation. *Indian J. Agric. Res.***37(2)**:120-123. **NAAS: 4.86**
16. Ghosh T.K., Singh R.P. **Duhan J.S.** and Yadav D.S. (2003). Biofertilizer Scenario in Haryana. Published by RBDC, Hisar, Ministry of Agriculture, Govt of India.
17. Dudeja S.S. and **Duhan J.S.** (2005). Biological nitrogen fixation research in pulses with special reference to mung bean and urd bean. *Indian J. Pluses Res.* **18 (20)**: 107-118.
18. Ghosh T.K., Singh R.P., **Duhan J.S.** and Yadav D.S. (2006). Response of moong cultivars to rhizobial inoculation. *Legume Research*, **29(3)**: 233-34. **IF: 0.116 NAAS: 6.15**
19. Singh V. Singh D. and **Singh J.** (2006). Edited book "Bioinformatics Computing", Narosa publishing House, New Delhi.
20. Vikas, Kumar R. and **Singh J.** (2006). Genomics-electrochemical nucleic acid sensing and clinical diagnostics. In "Bioinformatics computing" edited by Singh V. Singh D. and **Singh J.**, Narosa Publishing House, New Delhi. pp 81-87.
21. Nehra, K. and **Singh J.** (2006). From genomics to post genomics: achievement and challenges. In "Bioinformatics computing" edited by Singh V. Singh D. and **Singh J.** Narosa Publishing House, New Delhi. pp 88-97.
22. Mor S. and **Duhan J.S.** (2010). Marine pollution: Costs and Management. Proceeding of national conference on "Environmental degradation: effects, challenges & remedies" organized by JCD Memorial College of engineering, Sirsa, Feb. 25-27, 2010 pp.232-235.
23. **Duhan J.S.**, Bhardwaj, M. and Surekha (2011a). Free radical-scavenging and antimutagenic potential of acetone, chloroform and methanol extracts of leaf of *Argemone mexicana*. *Intern. J. Pharmacy & Biosci.* **2(1)**: B455-B464. **IF: 3.125**
24. **Duhan J.S.**, Bhardwaj, M. and Surekha (2011b). Free radical-scavenging and antimutagenic potential of acetone, chloroform and methanol extracts of fruit of *Argemone maxicana*. *African J. Biotechnology* **10 (43)**:8654-8661. **IF: 0.44**
25. Kumar A. and **Duhan J.S.** (2011). Production and characterization of amylase enzyme isolated from *Aspergillus niger* MTCC-104 employing solid state fermentation *Int. J. Pharmacy & Biosci.* **2(1)**: B250-B258. **IF: 3.125**
26. Surekha, **Duhan J.S.** and Saharan P. (2012). Biotechnology: its role in environment protection. Proceeding of national conference on "Recent advances in engineering technology and environmental issues" organized by JCD memorial College of engineering, Sirsa from Feb. 22-24, 2012, pp 357-361.
27. Surekha and **Duhan J.S.** (2012). Chromium stress on peroxidase, ascorbate peroxidase and acid invertase in pea (*Pisum sativum* L.) seedling. *Int. J. Biotechnology and Molecular Biology Research.* **3(2)**:15-21.
28. Bhardwaj M. **Duhan J.S.** Kumar A. and Surekha (2012). Antimicrobial potential of *Argemone mexicana*: *in vitro* study. *Asian J. Microbiol. Biotechnol, Environmental Sciences.***14 (2)**: 353-357. **NAAS: 4.93**
29. Jarnail Singh..... **Duhan J.S.** and Yadav P.S. (2012) Buffalo umbilical cord blood collection and hematological comparison with peripheral blood of the new born calf and its dam. *Indian J. Animal Sciences* **82(8)**:84-86. **IF: 0.227 NAAS: 6.17**
30. Singh J., Kumar P., Mann A., Singh V., **Duhan J.S.** and Yadav, P.S. (2012). Cell morphology and muco-polysaccharides in

early gestation buffalo umbilical cord. *The Indian Veterinary J.* **89(11)**:36-38.

**IF: 0.17**

**NAAS: 4.42**

31. Saharan P. **Duhan J.S.**, Gahlawat S.K. and Surekha. (2012). Antioxidant potential of various extracts of stem of *Thuja orientalis*: in vitro study. *Int. J. Applied Biol. Pharmaceutical Technology.* **3(4)**: 264-271. **SJIF: 2.943**
32. Surekha and **Duhan J.S.** (2012). Effect of chromium on different pea (*Pisum sativum*) genotypes. In "Biodiversity evaluation botanical prospective" (Eds. N.S. Atri, R.C. Gupta, M.I.S. Saggoo and V.K. Singhal). M/s Bishen Singh Mahendra Pal Singh, Dehradun. pp 251-256.
33. Kumar A. **Duhan J.S.**, Saharan P. and Surekha (2012) Process optimization for the production of sugar from potato and sweet potato starch for bio-ethanol industry. In "Energy-Water-Waste Nexus for Environmental Management" (Eds. Rani Devi, Mohd Kashif Kidwai, Pawan Kumar Rose, Alok Kumar Saran). Narosa Publishing House New Delhi, pp 43-50.
34. Mukesh Kumar, Kiran Nehra and **J.S. Duhan** (2013). Assessment of preliminary phytochemical analysis and antimicrobial activity of aqueous and solvent extract of leaf of *Tecomella undulate*. In "Environmental Biotechnology" (Eds. D.R. Khanna, A.K. Chopra, G. Matta, V. Singh & R. Bhutiani). Biotech Books, New Delhi, pp 333-347. ISBN978-81-7622-273-0.
35. Mukesh Kumar, Kiran Nehra and **J.S. Duhan** (2013). Phytochemical analysis and antimicrobial efficacy of leaf extracts of *Pithecellobium dulce*. *Asian J. Pharmaceutical & Clinical Res.*, **6(1)**: 70-76. **IF: 0.40**
36. Veni Bharti, Neeru Vasudeva, **Joginder Singh Duhan** (2013). Combination Studies of *Oreganum vulgare* extract fractions and volatile oil along with ciprofloxacin and fluconazole against common fish pathogens. *Advanced Pharmaceutical Bulletin*, **3(1)**: 239-246 doi: <http://dx.doi.org/10.5681/apb.2013.039> <http://apb.tbzmed.ac.ir/> **IF: 0.610**
37. **Joginder Singh Duhan** (2013). Tn5 mutants of *Rhizobium* sp.(*Cajanus*) and its role in nitrogen fixation and iron uptake in pigeonpea. *African J. Microbiological Research* **79 (16)**:1459-1464. Doi:105897/AJMR12.223 **IF: 0.22**
38. Ashok Kumar, **Joginder Singh Duhan** and Sunil Kumar Tanwar (2013). Screening of *Aspergillus* spp. for extra cellular  $\alpha$ -amylase activity. In "Impact of Global Climate Change on Earth Ecosystem" (Eds. Khanna, A.K. Chopra, G. Matta, V. Singh & R. Bhutiani). Biotech Books, New, Delhi, pp 205-214. ISBN 978-81-7622-271-6.
39. Pooja Saharan and **Joginder Singh Duhan** (2013). Studies on antioxidant activity, total phenolic and flavonoid contents of leaf extracts of *Thuja orientalis*. In "Impact of Global Climate Change on Earth Ecosystem" (Eds. Khanna, A.K. Chopra, G. Matta, V. Singh & R. Bhutiani). Biotech Books, New Delhi, pp 193-203. ISBN 978-81-7622-271-6.
40. Pooja Jangra, **Joginder Singh Duhan** and Surekha (2013) Extracellular lipase of *Alternaria* spp.: production and properties. In "Impact of Global Climate Change on Earth Ecosystem" (Eds. Khanna, A.K. Chopra, G. Matta, V. Singh & R. Bhutiani). Biotech Books, New Delhi, pp. 215-222. ISBN 978-81-7622-271-6.
41. Bharti Veni, Vasudeva Neeru and **Joginder Singh Duhan** (2013). Bacteriostatic and fungistatic activities of *Oreganum vulgare* extract and volatile oil and interaction studies in combination with antibiotics and antifungal agents against food poisoning pathogens. *Int. Food Res. J.* **20(3)**:1457-1462. ISSN-19854668(Print), ISSN-22317546 (Online) **IF: 0.77**
42. Singh J. Mann Anita, Kumar D. **Duhan J.S.** Yadav P.S. (2013). Cultured buffalo umbilical cord matrix cells exhibit characteristics of multipotent mesenchymal stem cells. *In Vitro Cellular & Developmental Biology- Animal* **49(6)**:408-16 doi: 10.1007/s 11626-013-9617-1, Epub2013 May 25. **IF: 1.814** **NAAS: 7.4**
43. Bharti Veni, Vasudeva Neeru, Sharma Sunil, **Duhan S. Joginder** (2013). Antibacterial activities of *Oreganum vulgare* extract and essential oil alone and in combination with different antimicrobials against clinical isolates of *Salmonella typhi*. *Ancient Science Life* **32(4)**:212-216 **DOI: 10.4103/0257-7941.131974**. ISSN-0972-060X. (Print), ISSN-0976-5026(online).
44. Sushma Kumari Panwar, Pardeep Kumar, **Joginder Singh Duhan**, Mahender Singh Saharan, Subhash Chander Bhardwaj, Ratan Tiwari and Indu Sharma (2013). Characterization of adult plant leaf rust resistance gene *Lr34* in Indian wheat genotypes using an STS marker. *J. Wheat Res.* **5(1)**:15-20. **NAAS: 4.42**
45. **Joginder S. Duhan**, Pooja Saharan and Surekha (2013). Phytochemical analysis and antimicrobial potential of leaf extracts of *Thuja orientalis*. *Asian Journal of Pharmaceutical and Clinical Research* **6(2)**: 291-294. **IF: 0.59**
46. **Joginder Singh Duhan**, Pooja Saharan, Surekha and Ashok Kumar (2013). Antimicrobial potential of various fractions of *Thuja orientalis*. *African J. Microbiol. Res.* **7(25)**: 3179-86.
47. **Joginder Singh Duhan**, Ashok Kumar and Sunil Kumar Tanwar (2013). Bioethanol production from starchy part of tuberous plant (potato) using *Saccharomyces cerevisiae* MTCC-170. *African J. Microbiol. Res.* **7(46)**: 5253-5260

48. Deepika Choudhary, Subhash Kajla, **J.S. Duhan**, Anil K. Poonia, Surekha, Pushpa Kharb (2013). Comparative study of various growth regulators on *in vitro* multiplication of commercial cultivar of banana cv. Grand naine (G-9). *Annals Biology* **29(3)**: 288-293. **NAAS: 4.08**
49. R.K. Salar, S.K. Gahlawat, P. Siwach and **J.S. Duhan** (2013). **Biotechnology: Prospects and Applications**. Springer, New Delhi, Heidelberg, New York, Dordrecht, London. ISBN 978-81-322-1682-7 ISBN 978-81-322-1683-4 (eBook). DOI 10.1007/978-81-322-1683-4
50. **J.S. Duhan**, K. Nehra, S.K. Gahlawat, P. Saharan and Surekha (2013). Bacteriocins from Lactic Acid Bacteria. In **"Biotechnology: Prospects and Applications"** (Eds. Salar R.K., Gahlawat S. K, Siwach P. and **Duhan J.S.**). Springer, New Delhi, Heidelberg, New York, Dordrecht, London, 127-142. ISBN 978-81-322-1682-7 ISBN 978-81-322-1683-4 (eBook). DOI 10.1007/978-81-322-1683-4
51. V. Dhull, A. Gahlaut, A. Gothwal, **J.S. Duhan**, V. Hooda (2013). Nitrite Biosensors: Analytical Tools for Determination of Toxicity due to presence of nitrite ions. In **"Biotechnology: Prospects and Applications"** (Eds. Salar R.K., Gahlawat S.K., Siwach P. and **Duhan J.S.**). Springer, Springer, New Delhi, Heidelberg, New York, Dordrecht, London, pp 217-226. ISBN 978-81-322-1682-7 ISBN 978-81-322-1683-4 (eBook). DOI 10.1007/978-81-322-1683-4
52. S. Kajla, A.K. Poonia, P. Kharb and **J.S. Duhan** (2013). Role of Biotechnology for Commercial Production of Fruit Crops. In **"Biotechnology: Prospects and Applications"** (Eds. Salar R.K., Gahlawat S. K, Siwach P. and **Duhan J.S.**). Springer, New Delhi, Heidelberg, New York, Dordrecht, London, 27-38. ISBN 978-81-322-1682-7 ISBN 978-81-322-1683-4 (eBook). DOI 10.1007/978-81-322-1683-4
53. P. Saharan, P. Khatri, S. Dingolia, **J.S. Duhan** and S.K. Gahlawat (2013). Rapid detection of viruses using loop-mediated isothermal amplification (LAMP): A Review. In **"Biotechnology: Prospects and Applications"** (Eds. Salar R.K., Gahlawat S.K, Siwach P. and **Duhan J.S.**). Springer, New Delhi, Heidelberg, New York, Dordrecht, London. 287-306. ISBN 978-81-322-1682-7 ISBN 978-81-322-1683-4 (eBook). DOI 10.1007/978-81-322-1683-4.
54. Deepika Choudhary, Subhash Kajla, Anil K. Poonia, **J.S. Duhan**, Ashwani Kumar, Pushpa Kharb (2014). An efficient micropropagation protocol for *Musa paradisiaca* cv. Robusta : A commercial cultivar. *Annals Biology* **30(1)** : 25-31. **NAAS : 4.08**
55. Pooja Saharan, Sudesh Dingolia, Poonam Khatri, **Joginder S. Duhan**, Suresh K. Gahlawat (2014). Loop-mediated isothermal amplification (LAMP) based detection of bacteria: A Review. *African J. Biotechnology* **13(19)**: 1920-1928. DOI: 10.5897/AJB2013.134459. **IF: 0.50,**
56. Pooja Bansal, **Joginder Singh Duhan** and Suresh Kumar Gahlawat (2014). Biogenesis of nanoparticles. *African J. Biotechnology*. **13(28)**: 2778-2785. DOI: 10.5897/AJB 2013.13458 **IF: 0.50**
57. K. Mehta and **J.S. Duhan** (2014). Production of invertase from *A. niger* by using fruit peel waste as a substrate. *Int. J. Pharmacy & Biosci.* **5(2)**: (B) 353-360. **IF: 3.125**
58. Ashok Kumar., **Joginder Singh Duhan.**, Surekha and Suresh Kumar Gahlawat (2014). Production of ethanol from tuberous plant (sweet potato) using *Saccharomyces cerevisiae* MTCC-170. *African J. Biotechnol.* **13(28)**: 2874-83. DOI: 10.5897/AJB2014.13608. **IF: 0.50**
59. Akansha Rana, Pooja Saharan, Pardeep Kumar, Surekha, **Joginder S. Duhan** (2014). Free radical scavenging and antimicrobial potential of mixture of selective medicinal plants. *Asian J. Pharmaceutical Clinical Res.* **7(4)**: 27-32. **IF: 0.40**
60. S. Kajla, D. Choudhary, A. K. Poonia and **J. S. Duhan** (2014). Rapid plant regeneration and molecular assessment of genetic stability using ISSR and RAPD markers in commercial banana cv. Grand naine (G-9). *J. Advances Biotechnology.* **4(3)**: 392-403.
61. Basanti Brar, **Joginder Singh Duhan**, Pankaj Rakha, Minakshi Prasad and Anjali Singh (2014). Antidepressant activity of various extracts from leaves of *Murraya koenigii* Spreng. Proceeding of National Seminar on NGSV (2014). Dept. of Zoology, MDU University, Rohtak. (India) pp 48-54. ISBN-978-81-920945-4-0
62. Basanti Brar, **Joginder Singh Duhan** and Pankaj Rakha (2015). Antidepressant activity of various extract from seed of *Ocimum basilicum* Linn. *Intern. J. Scientific Res.* **4(3)**: 41-43.
63. **Joginder Singh Duhan**, Akansha Rana, Pardeep Kumar Sadh, Pooja Saharan and Surekha (2015). Antimicrobial and free radical scavenging activity of selective medicinal plants combination. *World J. Pharmacy & Pharmaceutical Sci.* **4(3)**: 1202-1216. **IF: 6.647**
64. Pooja Saharan, **Joginder S. Duhan** and Suresh. K. Gahlawat (2015). Detection of *Pseudomonas fluorescens* from broth, water and infected tissues by loop-mediated isothermal amplification (LAMP) method. *African J. Biotechnol.* **14(4)**: 1181-1185. DOI: 10.5897/AJB2014.14360 **IF: 0.40**

65. Chaudhary D., Kajla S., Poonia A.K., B. Brar., **Duhan, J.S.** and Surekha.(2015).Molecular assessment of genetic stability using ISSR and RAPD markers in commercial banana cultivar cv. Robusta. *Indian J. Biotechnol.* 14: 420-424. **IF: 0.390 NAAS:**
- 6.29**
66. Basanti Brar, **Joginder Singh Duhan** and Pankaj Rakha (2015). Analgesic activity of various extracts of leaves of *Murraya koenigii* Spreng. *World J. Pharmacy & Pharmaceutical Sci.* 4(10): 1255-1262. **IF: 6.647**
67. Sushma Kumari Pawar, Davinder Sharma, **Joginder Singh Duhan**, Mahender Singh Saharan, Ratan Tiwari and Indu Sharma. (2016). Mapping of stripe rust resistance QTL in Cappelle– Desprez 3 PBW343 RIL population effective in northern wheat belt of India. *Biotech.* 16(6): 76-83. **IF: 2.270**
68. **Joginder Singh Duhan**, Kamal Mehta, Pardeep Kumar Sadh, Pooja Saharan and Surekha (2016). Bio-enrichment of Phenolics and Free Radicals Scavenging Activity of Wheat (WH-711) Fractions by Solid State Fermentation with *Aspergillus oryzae*. *African J. Biochem. Res.* 10(2): 12-19.DOI:10.5897/AJBR2015.0854
69. A. Kumar, P.K. Sadh, Surekha, **J.S. Duhan** (2016). Bio-ethanol production from sweet potato using co-culture of saccharolytic molds (*Aspergillus* spp.) and *Saccharomyces cerevisiae* MTCC170. *J. Advances in Biotechnology* 6(1):822-827.
70. **Joginder Singh Duhan**, Manju Bhardwaj, Pardeep Kumar Sadh and Surekha. (2016) *In vitro* antimicrobial efficacy, free radical scavenging activity and antimutagenic potential of stem extract of *Capparis decidua*. *World J. Pharmacy & Pharmaceutical Sciences.* 5(10)786-803. 10.20959/wjpps201610-7772 **IF: 6.647**
71. **Joginder Singh Duhan**, Ravinder Kumar, Naresh Kumar, Pawan Kaur, Kiran Nehra, Surekha Duhan (2017). Nanotechnology: The new perspective in precision agriculture. *Biotechnology Reports.* 15:11-23. Doi.org/10.1016/j.btre.2017.03.002
72. Suresh Kumar Gahlawat, Raj Kumar Salar, Priyanks Siwach **Joginder Singh Duhan**, Suresh Kumar and Pawan Kaur (2017). **Plant Biotechnology: Recent Advancements and Developments.** Springer, Nature Singapore Pte Ltd. Singapore. ISBN 978-981-10-4731-2, ISBN 978-981-10-4732-9 (eBook). DOI 10.1007/978-981-10-4732-9
73. Pooja Suneja, **Joginder Singh Duhan**, Namita Bhutani and Surjit Singh Dudeja (2017). Recent Biotechnological Approaches to Study Taxonomy of Legume Nodule Forming Rhizobia. In: **Plant Biotechnology: Recent Advancements and Developments.** (Eds. Gahlawat S.K., Salar R.K., Siwach P., **Duhan J.S.**, Suresh Kumar and Pawan Kaur) Springer, Nature Singapore Pte Ltd. Singapore. pp 101-124. ISBN 978-981-10-4731-2, ISBN 978-981-10-4732-9 (eBook). DOI 10.1007/978-981-10-4732-9
74. Sadh, P. K., **Duhan, J. S.**, Surekha and Saharan P (2017). Bioaugmentation of phenolics and antioxidant activity of *Oryza sativa* by solid state fermentation with *Aspergillus* Spp. *Intern. J. Food Res.* 24(3):1160-1166 **IF: 0.77**
75. Pooja Bansal, Pawan Kaur, Surekha, Anil Kumar and **Joginder Singh Duhan** (2017). Biogenesis of silver nanoparticles using *Aspergillus terreus*, its cytotoxicity and potential as therapeutic against human pathogens. *Res. J. Pharmaceutical, Biological & Chemical Sciences* 8(4) 898-906
76. Pardeep Kumar Sadh, Pooja Saharan, **Joginder Singh Duhan** (2017) Bio-augmentation of antioxidants and phenolic content of *Lablab purpureus* by solid state fermentation with GRAS filamentous fungi. *Resource-Efficient Technologies* 3:285-292.
77. Pardeep Kumar Sadh, Pooja Saharan, Surekha Duhan, **Joginder Singh Duhan** (2017). Bio-enrichment of phenolics and antioxidant activity of combination of *Oryza sativa* and *Lablab purpureus* fermented with GRAS filamentous fungi. *Resource-Efficient Technologies* 3:347-352.
78. Pardeep Kumar Sadh, Prince Chawla, Latika Bhandari, Ravinder Kaushik, **Joginder Singh Duhan** (2017). *In vitro* assessment of bio-augmented minerals from peanut oil cakes fermented by *Aspergillus oryzae* through Caco-2 cells. *J. Food Sci. Technol.* 54(11):3640-3649. DOI 10.1007/s13197-017-2825-z **IF: 1.849 NAAS: 7.24**
79. Pooja Saharan, Pardeep Kumar Sadh, **Joginder Singh Duhan** (2017). Comparative assessment of effect of fermentation on phenolics, flavanoids and free radical scavenging activity of commonly used cereals. *Biocatalysis & Agricultural Biotechnology.* 12: 236-240. DOI:10. 1016j.bcab2017.10.013 **IF: 2.140**
80. Pooja Bansal, Pawan Kaur, Surekha, Anil Kumar and **Joginder Singh Duhan** (2017) Microwave assisted quick synthesis method of silver nanoparticles using citrus hybrid “Kinnow”, and antimicrobial activity against early blight of tomato. *Research on Crops:* 18 (4): 650-655.
81. Pooja Bansal, Pawan Kaur and **Joginder Singh Duhan** (2017). Biogenesis of silver nanoparticles using *Fusarium pallidoroseum* and its potential against human pathogens. *Annal Biology.* 33 (2): 180-185 **NAAS: 4.08**



82. Pardeep Kumar Sadh, Surekha Duhan, **Joginder Singh Duhan** (2018). Agro-industrial wastes and their utilization using solid state fermentation: A review: *Bioresources and Bioprocessing*.5(1):1-15,<https://doi.org/10.1186/s40643-017-0187-z>  
**IF:3.470**
83. Pardeep Kumar Sadh, Prince Chawla, **Joginder Singh Duhan** (2018). Fermentation approach on phenolic, antioxidants and functional properties of peanut press cake *Food Bioscience*. 22: 113-120.10.1016/j.fbio.2018.01.011 **IF: 3.410**
84. Pardeep K. Sadh, Prince Chawla, Latika Bhandari, **Joginder S. Duhan** (2018). Bio-enrichment of functional properties of peanut oil cakes by solid state fermentation using *Aspergillus oryzae*. *J. Food Measurement and Characterization*. 12(1); 622-633. <https://doi.org/10.1007/s11694-017-9675-2>. **IF: 2.431**
85. Pawan Kaur, Rajesh Thakur, **Joginder Singh Duhan** and Ashok Chaudhary (2018). Management of wilt disease of chickpea *in vivo* by silver nanoparticles; biosynthesized by rhizospheric microflora of chickpea (*Cicer arietinum*). *Journal of Chemical Toxicology and Biotechnology*. (wileyonlinelibrary.com) DOI 10.1002/jctb. 5680 **IF: 2.587**
86. Pawan Kaur, **Joginder Singh Duhan** and Rajesh Thakur, (2018). Comparative pot studies of chitosan and chitosan-metal nanocomposites as nano-agrochemicals against fusarium wilt of chickpea (*Cicer arietinum* L.): A novel approach. *Biocatalysis and Agricultural Biotechnology*. 14:466-471. **IF:2.140**
87. Suresh Kumar Gahlawat, **Joginder Singh Duhan** Raj Kumar Salar, Priyanka Siwach, Suresh Kumar and Pawan Kaur Eds. **Advances in Animal Biotechnology and its Applications**” Springer, Nature Singapore Pte Ltd. Singapore; ISBN 978-981-10-4701-5; ISBN 978-981-10-4702-2 (ebook) Pp. 1-403.[doi.org/10.1007/978-981-10-4702-2](https://doi.org/10.1007/978-981-10-4702-2).
88. Kiran Nehra, Preti Yadav and **Joginder Singh Duhan** (2018). In-Silico Drug Designing: Transition to Modern-Day Drug Discovery, **In: Advances in Animal Biotechnology and its Applications** (Eds. Suresh Kumar Gahlawat, Joginder Singh Duhan, Raj Kumar Salar, Priyanka Siwach, Suresh Kumar, Pawan Kaur). Springer, Nature Singapore Pte Ltd. Singapore ISBN 978-981-10-4701-5; ISBN 978-981-10-4702-2 (ebook). Pp. 57-59. DOI: 10.1007/978-981-10-4702-2\_5
89. Pardeep Kumar Sadh, Suresh Kumar Rohilla, Sandeep Kumar and **Joginder Singh Duhan** (2018). Food Adulterations: Types, their Effects and Control, **In: Quality Control and Waste Utilization for Agriculture and Dairy Products** (Eds. Naveen Kumar, Ravinder Kaushik and Prince Chawla), New India Publishing Agency, New Delhi. Pp. 225-236.
90. SHALIMA SIHAG, SUBHASH KAJLA, ANIL K. POONIA AND **JOGINDER SINGH DUHAN** (2018). Effect of Different Carbon Sources and Gelling Agents on *in vitro* Multiplication of *Aloe vera*. *Annals of Biology* 34 (1): 12-15.
91. Pardeep Kumar Sadh, Suresh Kumar, Prince Chawla and **Joginder Singh Duhan** (2018). Fermentation: A Boon for Production of Bioactive Compounds by Processing of Food Industries Wastes (By-Products). *Molecules* 23, 2560; doi:10.3390/molecules23102560 **IF: 3.267**
92. Pooja Saharan, Pardeep Kumar Sadh, **Joginder Singh Duhan** (2018). Assessment of Fermentation Based Enrichment of Bioactive compounds and Antioxidant Activity of Commonly Used Cereals. *International Journal of Food and Fermentation Technology* 8(2): 1-10.
93. **Joginder Singh Duhan**, Pooja Saharan and Pardeep Kumar Sadh (2019). Effect of Production Parameter on Release of Phenolic Content of Peanut Press Cake Fermented with *A. oryzae* and *A. awamori*. *Intern. J. Pharmacy & Biological Sci.*9(2): 434-444. **IF: 0.832**
94. Pooja Saharan; Pardeep Sadh, Surekha Duhan and **Joginder Singh Duhan** (2020). Bio-enrichment of phenolic, flavonoids content and antioxidant activity of commonly used pulses by solid-state fermentation. *Journal of Food Measurement and Characterization*. 14(3):1497-1510. DOI 10.1007/s11694-020-00399-z **IF: 2.431**
95. **Joginder Singh Duhan**, Prince Chawla, Suresh Kumar, Aarti Bains and Pardeep Kumar Sadh (2021). Proximate Composition, Polyphenols and Antioxidant Activity of Solid State Fermented Peanut Press Cake. *Preparative Biochemistry & Biotechnology*.51:4, 340-349 <https://doi.org/10.1080/10826068.2020.1815060> **IF:1.415**
96. **Joginder Singh Duhan**, Prince Chawla, Suresh Kumar, Aarti Bains and Pardeep Kumar Sadh (2020). Solid state fermented peanut press cake: assessment of biochemical properties, mineral bioavailability, and its application in sweetened yogurt cheese. *Biocatalysis and Agricultural Biotechnology*. (29): <https://doi.org/10.1010/j.bcab.2020.101780> **IF: 2.140**
97. Surinder Paul and **Joginder Singh Duhan** (2021). UPPER EXPOSED PEDUNCLE LENGTH VARIATIONS STUDIES IN WHEAT CULTIVARS IN RESPONSE TO HEAT STRESS AT VARIED SOWING TIMES. *Plant Archives*. 21 (Suppl.1): 2016-2019. [doi.org/10.51470/PLANTARCHIVES.2021.V21.s1.328](https://doi.org/10.51470/PLANTARCHIVES.2021.V21.s1.328)
98. Ravinder Kumar, Agnieszka Najda, **Joginder Singh Duhan**, Balvinder Kumar, Prince Chawla, Joanna Klepacka, Seweryn Malawski, Pardeep Kumar Sadh and Anil Kumar Poonia (2021) Assessment of Antifungal Efficacy and Release Behavior of

99. **J.S. Duhan**, Deepika Choudhary, Subhash Kajla, Anil K. Poonia and Basanti Brar (2019). Analysis of genetic diversity of banana cultivars by using RAPD and ISSR markers. *Biotechnology: Research and Innovation* (Communicated)
100. Pooja Saharan, **Joginder S. Duhan** and Suresh K. Gahlawat (2019). Direct detection of *Aeromonas hydrophilla* by using loop-mediated isothermal amplification (LAMP) method from water and tissue samples. *Biotechnology: Research and Innovation*. (Communicated).
101. **Joginder Duhan**, Pooja Bansal, Pardeep Sadh, Ravinder Kumar, Anil Kumar and Pawan Kaur (2019). Bio-efficacy of silver nanoparticles synthesized by *Microbacterium mitrae* in controlling early blight in tomato. *Biotechnology: Research and Innovation*. (Communicated)

#### B. Popular articles

1. Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999). *Azospirillum*: ganne ki sthir pedawar mein prakartik vardan. *Prakartik Kheti*. **1**: 7-8.
2. Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999). Marida ki urvara shakti badhane hetu Rhizobium culture ka yogdan. *Prakartik Kheti*. **4**: 11-14.
3. Ghosh T.K., Tyagi M.K. and **Duhan J.S.** (1999). *Azospirillum*: a nature boon to boost sustainable cane production. *Farmer & Parliament*. **46**:17.
4. Ghosh T.K. and **Duhan J.S.** (2001). Phosphate biofertilizer. *Haryana Farming*. 31(6):18-21.
5. Ghosh T.K., Singh R.P., **Duhan J.S.** and Yadav D.S. (2001). Jaiv urvarkon ka sabjiyon avom bagwani par prabhav. *Haryana Kheti*. **35 (7)**: 11.
6. Ghosh T.K., Singh R.P., **Duhan J.S.** and Yadav D.S. (2002). Sabaji wali fasslo mein jaiv urvarkon ka paryog. *Krishak vandna*. **6 (12)**: 20-21.

#### C. Radio/TV talks

1. **Duhan J.S.** (1997). Use of biofertilizer in agriculture. Broadcast from A.I.R, Kurukshetra on 30.5.1997.
2. **Duhan J.S.** (1999). Adhik pedawar mein jaiv urvarkon ka yogdan: Aakashvani Rohtak dwara 25.3. 99 ko prasarit.
3. **Duhan J.S.** (1999). Sarson ki adhik pedawar lene mejn jaiv urvark ka prayog: Aakashvani Rohtak dwara 31.8.99 ko prasarit.
4. **Duhan J.S.** (2001). Ganne mein jaiv urvarkon (*Azotobacter*) ka paryog: Aakashvani Rohtak Dwara 6.3.2001 ko prasarit.
5. **Duhan J.S.** (2001). Sarson ki adhik pedawar mein Azotobacter ka mahetwa: Aakashvani Rohtak dwara 3.9.2001 ko prasarit
6. **Duhan J.S.** (2002). Sarson ki fasal se adhik pedawar mein jaiv urvark ka yogdan: Aakashvani Rohtak dwara 5.10.2002 ko prasarit.
7. **Duhan J.S.** (2005). Faslo mein jaiv urvarko ka mahatav: Aakashvani Rohtak dwara 13-02-2005 ko prasarit.
8. **Duhan J.S.** (2006). Sabaji fasalo main jaiv urvark ka paryog –a talk: Aakashvani Rohtak dwara 23-3-2006 ko parsarit.

#### D. Conference, Seminar/ Workshop organized

1. **Organizing Secretary** of National Conference on “Bioinformatics Computing” (Bio Con -2006). Organized by Dept.of Computer Science & Engineering and Biotechnology on 19<sup>th</sup> Feb. 2006 at CDLU, Sirsa.
2. **President** of two weeks National Workshop on Research Methodology (NWRM-2011) held on 02-15 March, 2011 organized by Dept. of Computer Science & Application, CDLU. Sirsa.
3. **Co-ordinator** of two weeks National Workshop on “Basic Techniques in Biotechnology, Food Technology and Bioinformatics” form June 15-28, 2011 organized by Dept. of Biotechnology and Food Science& Technology, CDLU, Sirsa.
4. **Organizing secretary** of one-day workshop on “Patent awareness: issues and challenges” on 10<sup>th</sup> August, 2011, organized by Dept. of Biotechnology, CDLU, Sirsa and sponsored by CPB, Hisar and TIFAC, DST, New Delhi.

5. **Organizing secretary** of three days “International Conference on Biotechnology: Emerging Trends (ICB-2012)” organized by Dept. of Biotechnology, CDLU, Sirsa from Sept. 18-20, 2012.
6. **Organizing secretary** of two days “National Conference on Biotechnology: Emerging Trends (NCB-2016)” organized by Dept. of Biotechnology, CDLU, Sirsa from Feb.11-12, 2016.
7. **Organizing secretary** of one-day workshop on “Patent awareness” on 8<sup>th</sup> March, 2016, organized by Dept. of Biotechnology, CDLU, Sirsa, sponsored by Department of Science & Technology, Panchkula, Haryana.
8. **Co-convenor** of one-day National Workshop on Intellectual Property Rights held on 21<sup>st</sup> March, 2017 organized by Faculty of Physical and Life Sciences, CDLU, Sirsa, sponsored by Department of Science & Technology, Panchkula, Haryana.

#### **E. Invited for conferences/ seminars/ workshops/ symposia to deliver lectures/ Chair sessions-**

1. **Duhan J.S.** (2000). Delivered lecture on 8/3/2000 on “Role of Biofertilizer in IPNS system in National Training Course organized by National biofertilizer dev. Centre, Ghaziabad from March 8-15, 2000.
2. **Duhan J.S.** and Dudeja S.S. (2000). Assessment of siderophore production by pigeonpea Rhizobia in relation to nodulation and nitrogen fixation. Delivered in 41<sup>st</sup> annual Conference of AMI held on Nov. 25-27, 2000 at Birla Institute of Scientific Research, Statue Circle, Jaipur.
3. **Duhan J.S.** (2005). Delivered a lecture on refrestation and revegenation as Chief Guest In the Haryali Yojana Programme organized by DRDA, Sirsa in village Thobaria division Elanadabad on 20<sup>th</sup> Oct. 2005.
4. **Duhan, J.S.** (2008). Delievered a lecture entitled “Production technolog of Biofertilizer” on 19<sup>th</sup> Nov. 2008 in a training programme organized by National Centre of Organic Farming, Ministry of Agriculture, Govt. of India, Ghaziabad, U.P.
5. **Duhan, J.S.** (2008). Delievered a lecture entitled “Application of Biofertilizer in Agriculture” on 19<sup>th</sup> Nov. 2008 in a training programme organized by National Centre of Organic Farming, Ministry of Agriculture, Govt. of India, Ghaziabad, U.P.
6. **Duhan, J.S.** (2009). Delivered a lecture entitled “Production technology of biofertilizer” on 17<sup>th</sup> Nov. 2009 in a training programme” Organic Farming” organized by Regional Centre of Organic Farming, Ministry of Agriculture, Govt. of India, 798, Patel Nagar, Hisar, from 15-19<sup>th</sup> Nov. 2009.
7. **Duhan, J.S.** (2009). Delivered a lecture entitled “Application of biofertilizers in agriculture” on 17<sup>th</sup> Nov. 2009 in a training programme” Organic Farming” organized by Regional Centre of Organic Farming, Ministry of Agriculture, Govt. of India, 798, Patel Nagar, Hisar from 15-19<sup>th</sup> Nov. 2009.
8. **Duhan, J.S.** (2011). Acted as resource person in UGC sponsored Workshop on “Basic technique in Biotechnology, Food Technology and Bio-informatics “from June 15-28, 2011 organized by the Department of Biotechnology and Food Science & Technology, delivered the following lecture and demonstrated in the laboratory.
  - i) Isolation of industrially important microorganism on 22 June 2011
  - ii) Ethanol production from yeast on 24 June 2011
9. **Duhan J.S.** (2011). Delivered an extension lecture on “Biofertilizers and Indian Agriculture” on 23<sup>rd</sup> Sept.2011 in five days training programme on “Organic Farming” organized by Regional Centre Organic Farming, Ministry of Agriculture, GOI, 789, Patel Nagar, Hisar
10. Technical session chaired by **J.S. Duhan** on the theme Biotechnology & Energy in Global Congress on Biotechnology, Nanotechnology and Energy & Environment organized by Dept. of Biotechnology, DCRUS&T, Murthal, Sonapat on 25-26<sup>th</sup> April, 2018.
11. Judge the poster session on the theme “Biotechnology” in Global Congress on Biotechnology, Nanotechnology and Energy & Environment organized by Dept. of Biotechnology, DCRUS&T, Murthal, Sonapat on 25-26<sup>th</sup> April, 2018.

#### **F. Conference, seminar and workshop attended/ paper presented**

1. Lakshinarayana K. and **Duhan J.S.** Role of microorganism in allelopathy. Presented in “International Symposium on Allelopathy in Agro-ecosystem held on Feb.12-14, 1992 at CCS Haryana Agricultural University, Hisar.
2. Lakshinarayana K. and **Duhan J.S.** Effect of allelopathic rhizosphere of *Acacia nilotica* on *Azotobacter chroococcum* and *Rhizobium* cowpea. Presented in “National Symposium on Allelopathy in Agroecosystem” held on Feb.12-14, 1992 at CCS Haryana Agricultural University, Hisar.

3. **Duhan J.S.** Dudeja S.S. and Khurana A.L. The role siderophore in symbiotic nitrogen fixation by pigeonpea root nodule bacteria. Presented in 36<sup>th</sup> annual conference of AMI held on Nov.8-10, 1995 in the Dept. of Microbiology, COBS & H, CCS HAU, Hisar.
4. Upadhyay, K.K., **Duhan J.S.** and Dhar B. A. good nodulation in frenchbean (*Phaseolus vulgaris*)- a large seeded grown in plant nutrient agar slants. Presented in 36<sup>th</sup> annual conference of AMI held on.8-10 Nov.1995 in the Dept. of Microbiology, COBS&H, CCS HAU, Hisar.
5. **Duhan J.S.** Narula N. and Lakshminarayana K. Allelopathic effect of *Acacia nilotica* on survival and nitrogen fixing activity of *Azotobacter chroococcum*. Presented in seminar "National Resource Management Focus on Plant Microbe Interaction in Sustainable Agriculture" held on Dec.11-13, 1995 in COBS&H, CCS HAU,Hisar.
6. **Duhan J.S.** Dudeja S.S. and Khurana A.L. Nodulation competitiveness in pigeonpea host as influenced by siderophore producing mutant of *Bradyrhizobium* spp. *cajanus* strain. Presented in International Conference on Sustainable Crop production in fragile Environments held on.25-28 Nov.1996 in College of Agriculture, CCS Hisar.
7. Kumar V. Sheoran A. **Singh J.** Wati L. and Singh. Bioremediation of anaerobically digested distillery spent wash using *Lactobacillus casei*. Presented in "National Symposium on Microbial Technology for Environmental Management and Resource Recovery held on Oct. 1-2, 1997 in the Dept. of Microbiology, Delhi University south campus) New Delhi.
8. Attended the 2<sup>nd</sup> Convention of CCS HAU Alumni Association and seminar on "Govt- Universities- Industry-linkage" held on Feb. 1-2, 2003 at Hisar.
9. Attended the 3<sup>rd</sup> Convention of CCS HAU Alumni Association and seminar on "Livestock Resources Management in Rural Economy" held on Feb. 19-20, 2005 at Hisar.
10. Vikas, Kumar, R. and **Singh J.** Genomics- electrochemical DNA sensing & clinical diagnostics. Presented in National Conference on "Bioinformatics Computing" held on 19th Feb 2006, Organized by the Dept. of Computer Science & Engineering and Dept. of Biotechnology, CDLU., Sirsa.
11. Attended the 4<sup>th</sup> Convention of CCS HAU Alumni Association and Seminar on "Indian Agriculture - Future Challenges" held on March 8-9, 2007 at Hisar.
12. **Duhan J.S.** and Bhardwaj M. Antioxidant and antimutagenic activity of different extract of *Capparis decidua* presented in the International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics (through 49<sup>th</sup> Annual Conference of Association of Microbiologist of India) organized by Dept. of Zoology and Microbiology of Delhi University at Delhi University North Campus from 18<sup>th</sup> to 20<sup>th</sup> Nov. 2008.
13. Chaudhary D. Kajla S. **Duhan J.S.** Kumar A. and Dhawan A.K. Influence of adenine sulphate on *in vitro* shoot proliferation of banana cultivar Robusta. Presented in Zonal Seminar on Abiotic Stress Tolerance in Plants- Physiological and Biotechnological approaches held on 5<sup>th</sup> Dec. 2009 organized by Centre for Plant Biotechnology CCS HAU New Campus, Hisar.
14. Attended the 5<sup>th</sup> convention of CCS HAU Alumni Association and Seminar on "Impact of climate change on agriculture" held on 30<sup>th</sup> December 2009 at Hisar.
15. Singh J. Mann A. Singh V. **Duhan J.S.** and Yadav P.S. Buffalo umbilical cord matrix as possible source of stem cells. Presented in International Buffalo Conference on "Optimizing buffalo productivity through conventional and novel technologies", organised by CIRB, Hisar on 1-4<sup>th</sup> Feb 2010 at NASC complex, New Delhi.
16. Surekha and **Duhan J.S.** Effect of chromium on different pea (*Pisum sativum*) genotype. Presented in National Symposium on "Botanical Researches-Present Scenario organised by Punjabi University". Patiala on Feb. 18-19, 2010.
17. Mor S. and **Duhan J.S.** Marine pollution: Costs and Management. Presented in National Conference on "Environmental degradation: effects, challenges & remedies". Organised by JCD Memorial College of Engineering, Sirsa, from 25-27-2010.
18. Kumar M. Nehra K. **Duhan J.S.** and Malik K. Antimicrobial activity of *Pithecellobium dulce* (roxb) Benth. Against various human pathogenic microbes. Presented in National Workshop on "Biodiversity: Challenges & Opportunities" Organized by Department of Botany, M.D.U., Rohtak from February, 18-19 2011, on 18<sup>th</sup> Feb. only.
19. Saharan, P. **Duhan J.S.**, Kumar A. and Surekha. Antimicrobial potential of various extracts of *Thuja orientalis*. Presented in International conference on microbial biotechnology for sustainable development (52<sup>nd</sup> Annual Conference of AMI-2011) organized on November 3-6, 2011 by Dept. of Microbiology, Punjab University, Chandigarh. (Attended).
20. Attended on day national seminar on "Communal Harmony, Peace and Social Justice" organized by UGC cell of CDLU, Sirsa on 5<sup>th</sup> Dec.2011.

21. Kumar A. **Duhan J.S.**, Saharan P. and Surekha (2012) Process optimization for the production of sugar from potato and sweet potato starch for bio-ethanol industry. Presented in the international conference on energy-water-waste nexus for environmental management, organized by dept. of Energy and Environmental Sciences, Ch. Devi Lal University Sirsa from Jan, 28-30, 2012 pp 43-50. (Attended).
22. Surekha, **Duhan J.S.** and Saharan P. (2012). Biotechnology: its role in environment protection. Presented in 4<sup>th</sup> national conference on recent advances in engineering technology and environmental issues. Organized by JCD memorial College of Engineering, Sirsa Feb. 22-24 Feb. 2012.
23. **Duhan J.S.**, Nehra K., Bishnoi P., Gahlawat S.K., Saharan P. and Surekha. (2012). Bacteriocin production from lactic acid bacteria. Presented in "international Conference on Biotechnology: Emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, CDLU, Sirsa from Sept. 18-20, 2012.
24. Kharb N. Chauhan M.S., Kaushik R. Arora J. and **Duhan J.S.** (2012). Analysis of polymorphism at kappa casein gene by PCR- RFLP in sahiwal cattle: a new genetic variant in Indian dairy cattle" Presented in "international Conference on Biotechnology: Emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, CDLU, Sirsa from Sept. 18-20, 2012.
25. Singh J., Maan A., Kumar D., **Duhan J.S.** and Yadav P.S. (2012). Buffalo umbilical cord matrix cells exhibit multilineage differential potential in vitro. Presented in "international Conference on Biotechnology: Emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, CDLU, Sirsa from Sept. 18-20, 2012.
26. Gahlaut A., Gothwal A., Dhull V., **Duhan J.S.** and Hooda V. (2012). "Ascorbate oxidase based reusable PVC strip for biochemical analysis of ascorbic acid in samples." Presented in "International Conference on Biotechnology: emerging Trends (ICB-2012)" organized by Dept. of Biotechnology, Chaudhary Devi Lal University, Sirsa (India) on Sept. 18-20, 2012.
27. Kumar A., **Duhan J.S.**, Saharan P., Gahlawat S.K., Surekha and Tanwar S.K. (2013)." Bioethanol production from starchy part of tuberous plant (potato) using *Saccharomyces cerevisiae* mtcc-170" Presented in national symposium on "Biotechnology: Present Status and Future Prospects" organized by Dept. of Biotechnology, DCRUST, Murthal , Sonipat (India) on March 15-16,2013.
28. Attended the summit on "National Cyber Safety & Security Standard" from 27-28<sup>th</sup> April, 2013 organized by National Cyber Safety Limited, Cyber House-Southern Region, No. 62/3, Panchaliamman Koil Street, Arumbakkam, in the auditorium of Japiaar College of Engineering OMR Road, Chennai.
29. **Joginder Singh Duhan**, Pardeep Kumar, Pooja Saharan and K.P.S. Yadav. Enrichment of natural antioxidants and phenolics of *Lablab purpureus* by solid state fermentation with GRAS filamentous fungi. Presented in 54<sup>th</sup> Annual Conference of AMI i.e. "International symposium on frontier discoveries and innovations in microbiology and its interdisciplinary relevance (FDMIR-2103", organised by Dept. of Microbiology MDU, Rohtak and NIFTEM, Sonapat at MDU, Rohtak on Nov. 17-20, 2013.
30. Attended the National Seminar on "Natural Language and Computer Science NLCS-2014" Organized by Department of Computer Science and Applications, CDLU, Sirsa on March 07, 2014.
31. Attended one-day workshop on Right to Information Act, 2005, Organized by Department of Public Administration, CDLU, Sirsa in collaboration with HIPA, Gurgaon on February 05, 2015.
32. **Joginder Singh Duhan**, Pardeep Kumar and Surekha. Bioaugmentation of phenolics and antioxidant activities of combination of rice and seim fermented with grass filamentous fungi. Presented in National Conference on Biotechnology; Emerging Trends (NCB-2016) organized by dept. of Biotechnology, CDLU, Sirsa from 11-12 Feb. 2016.
33. Attended of one-day workshop on "Patent awareness" on 8<sup>th</sup> March, 2016, organized by Dept. of Biotechnology, CDLU, Sirsa, sponsored by Department of Science & Technology, Panchkula, Haryana.
34. **Joginder Singh Duhan** and Pooja Bansal. Green synthesis of silver nanoparticles and their potential against plant pathogens. Presented in the National Conference on Trends in Nanotechnology (NCTN-2016) organized by Dept. of Molecular Biology, Biotechnology and Bioinformatics, College of Basic Sciences & Humanities, CCS HAU, Hisar on November 29-30, 2016 at COBS&H CCS HAU, Hisar.
35. **Joginder Singh Duhan**, Pardeep Kumar Sadh, Suresh Kumar, Pawan Kaur, Prince Chawla. (2017). Fermentation Effect on Biochemical Properties of Peanut Press Cake. Presented in International Conference on Microbe for Health and Wealth organized by Dept. of Microbiology, MDU, Rohtak on 14 Nov., 2017.
36. **J.S. Duhan**, P. Bansal, P. Kaur, P.K. Sadh, R. Sulakh and A. Kumar (2018). Bio-efficacy of silver nanoparticles synthesized by *Microbacterium mitrae* in controlling early blight in tomato, presented in "Global Congress on Biotechnology,

Nanotechnology and Energy & Environment” organized by Dept. of Biotechnology, DCRUS & T, Murthal, Sonapat. 25-26<sup>th</sup> April, 2018.