BIO DATA OF DR. RAJ KUMAR SALAR

PERSONAL STATUS

Name: **DR. RAJ KUMAR SALAR**
Sex: Male
Date of Birth: February 28, 1968
Citizenship: India
Permanent Address: Vill. & P.O. Sikri
Distt. Karnal – 125 055, India

Correspondence Address Department of Biotechnology
Chaudhary Devi Lal University, Sirsa, 125 055, India
Phone: +91-1666-248179 (R),
98961-06467 (M)
E-mail: rajsalar@rediffmail.com

CURRENT STATUS **Professor & Chairperson**, Deptt. of Biotechnology, Chaudhary Devi Lal University, Sirsa – 125 055, India
Dean, Faculty of Life Sciences
Chaudhary Devi Lal University, Sirsa – 125 055, India

FIELD OF SPECIALIZATION: **Microbial Biotechnology**

RESEARCH AND TEACHING EXPERIENCE

Research: **Twenty two Years** as Project Fellow, Junior Research Fellow, Senior Research Fellow, Lecturer, Assoc. Professor, Professor and Post Doc. (Slovak Republic)

Teaching: **Eighteen Years** (Botany, Bioprocess Technology, General & Industrial Microbiology)

Research Guidance: 33 M. Sc. Students were guided for their Research Projects
15 M. Phil. (Completed)
6 Ph.D. Students (Completed), 5 (Pursuing)

ADMINISTRATIVE EXPERIENCE

Incharge: Department of Biotechnology, from February 2005-August, 2007.
Chairperson: Department of Biotechnology – 13 Sept., 2007 - Dec.18, 2008, Dec. 19, 2011- Dec. 18, 2014 & Dec. 19, 2017 to till date.

Dean: Faculty of Life Sciences C.D.L.U., Sirsa from Sept., 2007 to Dec.18, 2008 & Dec. 27, 2017 to till date

Director: Career & Counseling Cell, C.D.L.U., Sirsa from Jan., 2011 June, 2017

State Public Information Officer, C.D.L.U., Sirsa from Sept., 2011 to Jan. 2013.

AWARDS AND HONOURS

- Awarded Haryana State Merit Scholarship (1988-90)
- JRF and SRF of University Grants Commission, New Delhi (1992-1996)
- Distinction in M. Phil. Dissertation
- GATE – 1992 - Conducted by Ministry of HRD, New Delhi, Govt. of India
- Awarded Travel Grant by DST (Ministry of Sc. Tech.) to attend IMC7 at Oslo(**Norway**)
- Awarded Grant by Govt. of Japan to attend 10th International Congress for Culture Collection at Tsukuba (**Japan**)
- Awarded **Postdoctoral Fellowship** of the Ministry of Education of Slovak Republic (01-01-2010 to 17-07-2010) and carried out PDF at the Department of Biochemical Technology, Slovak University of Technology in Bratislava, **Slovakia**
- **Received KACST award (Saudi Arabia)** for Best Research Paper published during 2013 in *3 Biotech* Journal along with a cash prize of $5000, Citation and Medal.

Research Projects

1. **"Biodegradation of Xenobiotics by microorganisms isolated from hotspring soils"** sanctioned by Haryana State Council for Science & Technology, Chandigarh for two years (2007-2009), **Amount 4.33 Lakh** (completed)
2. **"Modulation of phenolic content and antioxidant activity of barley and pearl millet using solid state fermentation"** sanctioned by University Grants Commission, New Delhi (2012-2015) **Amount 13.03 Lakh** (completed)

BOOKS

1. Biotechnology: Prospects and Applications (R.K. Salar, S.K. Gahlawat, P. Siwach, J.S. Duhan *Editors*) **(2013)**, Springer, Germany, ISBN: 978-81-322-1682-7

2. Plant Biotechnology: Recent Advancements and Developments (S.K. Gahlawat, **R.K. Salar,** P. Siwach, J.S. Duhan, Suresh Kumar, Pawan Kaur *Editors*) **(2017)**, Springer Nature, Singapore ISBN: 978-981-10-4731-2

3. Advances in Animal Biotechnology and its Applications (S.K. Gahlawat, J.S. Duhan, **R.K. Salar,** P. Siwach, Suresh Kumar, Pawan Kaur *Editors*) **(2018)**, Springer Nature, Singapore (In Press)

4. Thermophilic Fungi: Basic Concepts and Biotechnological Applications (Raj Kumar Salar) (2018), CRC Press (Taylor & Francis Group, USA)
ISBN-10: 0815370709, ISBN-13: 978-0815370703.

FOREIGN VISITS

1. Visited **Norway** and presented research paper in the 7th International Mycological Congress held at the Biological Institute of the University of Oslo, Oslo (Norway) from 11th Aug., 2002 to 17th Aug. 2002.
2. Visited **Japan** and presented research paper in the 10th International Congress for Culture Collections held at Tsukuba, Japan from 10th Oct., 2004 to 15th Oct., 2004.
3. Visited **Slovakia** to pursue **Postdoctoral Research** at the Department of Biochemical Technology, Slovak University of Technology in Bratislava, Slovakia
4. Other countries visited: **Austria, Hungary**

INVITED LECTURE DELIVERED

1. Delivered a lecture on **"Botanicals as Biopesticides"** at the Gene Function and Research Centre, National Institute of Advanced Industrial Science and Technology (AIST), **Tsukuba, Japan** on 12th Oct., 2004.

CONFERENCES ATTENDED:

International: 11 **National: 10**

MEMBERSHIP OF PROFESSIONAL BODIES

1. Member, Post Graduate Board of Studies in Biotechnology, CDLU, Sirsa
2. Member, Departmental Research Committee, CDLU, Sirsa
3. Member, Institutional Biosafety Committee, CDLU, Sirsa
4. Member, Internal Quality Assurance Cell, CDLU, Sirsa
5. Life Member, Association of Microbiologists of India
6. Life Member, Mycological Society of India
7. Member Scientist (Biotechnology) Haryana State Council for Science & Technology, Chandigarh

BRIEF CHRONOLOGY OF EDUCATION AND CAREERS

1983: Matriculation, (second class) Board of School Education, Bhiwani, Haryana
1988: B.Sc. (first class), Govt. College, Karnal, Kurukshetra University, Kurukshetra
1990: M.Sc. (first class), Department of Botany, Kurukshetra University, Kurukshetra
1992: M.Phil. (first class with Distinction) Department of Botany, Kurukshetra University, Kurukshetra
1995: Certificate Course in German Language
1997: Ph.D. Department of Botany, Kurukshetra University, Kurukshetra
2010: PDF, Department of Biochemical Technology, Slovak University of Technology in Bratislava, Slovak Republic

CAREERS

Dec. 99 – Aug.2003: Lecturer, Department of Botanical & Environmental Sciences, Guru Nanak Dev University, Amritsar
Sept. 03 –Jul. 2004: Assistant Professor, Department of Biotechnology Engineering Ambala College of Engg. & Applied Res.Devsthali, Ambala
Aug. 04 – Aug. 2007: Lecturer, Department of Biotechnology Chaudhary Devi Lal University, Sirsa – 125 055, India
Aug. 07 – Aug. 2013: Associate Professor, Department of Biotechnology Chaudhary Devi Lal University, Sirsa – 125 055, India
Aug. 2013 - till date: Professor, Department of Biotechnology Chaudhary Devi Lal University, Sirsa – 125 055, India

THESES

1. Studies on Thermophilic Fungi from Decomposing Wheat Straw and Stored Grains **(M. Phil.)**
2. Taxophysiological Studies on Thermophilous Fungi from North Indian Soils **(Ph.D.)**

TRAINING/ WORKSHOP

1994: Training program on writing a scientific paper organized by Publication and Information Directorate (CSIR), New Delhi (17-21 Oct., 1994)
1995: National Training Course on 'Mushroom Production Technology' organized by N.C.M.R.T., Solan (H.P.) (19-26 Sept., 1995)
2003: Completed one week training programme on **'Fermentation Technology'** at NIPER, Mohali, Punjab.
2004: Attended training programme on **'Bioinformatics'** at DOEAC, Centre, Sector 17, Chandigarh
2005: Attended 4 weeks Orientation course at Academic Staff College, Shimla (13th May, 2005 to 9th June, 2005)
2011: Attended 2 weeks National Workshop on "Basic Techniques in Biotechnology, Food Technology and Bioinformatics" at CDLU, Sirsa (June 15-28, 2011)
2011: Attended One day National Workshop on "National Patent Awareness Workshop: Issues and Challenges" at CDLU, Sirsa (August 10, 2011)
2016: Attended One day National Workshop on "Patent Awareness" organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa on March 19, 2016.
2016: Attended One day Workshop on "Choice based Credit System" organized by Chaudhary Devi Lal University, Sirsa on March 26, 2016.

RESEARCH INTERESTS

Taxonomy: Isolation, identification and culture of Microbes from various sources

Bioprocesses: Extracellular Enzymes from Microbes and their industrial applications and solid state fermentation for value added products

Bioremediation: Biodegradation of xenobiotics using microbes

Natural Products: Antimicrobial, antioxidant and anticancerous properties of medicinal plants

CONFERENCES ATTENDED

1. Attended 17th Botanical Conference of the Indian Botanical Society, held at Dept. of Botany, Punjab University, Chandigarh, Oct. 21-23, 1994 (presented paper)
2. Attended 36th Annual Conference of Association of Microbiologists of India, held at Dept. of Microbiology, C.C.S.H.A.U., Hisar, 8-10 Nov., 1995 (presented paper)
3. Attended 83rd Indian Science Congress held at Punjabi University, Patiala, 3-8 Jan., 1996
4. Attended 84th Indian Science Congress held at Delhi University, Delhi, 3-8 Jan., 1997
5. Attended First International Conference on "From Ethnomycology to Fungal Biotechnology held at Holiday Home, Shimla, 15-16 Dec., 1997 (presented paper)
6. Attended 7th International Mycological congress held at the Biological Institute of the University of Oslo, Oslo (Norway) from 11th Aug., 2002 to 17th Aug. 2002.
7. Attended 10th International Congress for Culture Collections held at Tsukuba, Japan from 10th Oct., 2004 to 15th Oct., 2004.
8. Attended 4th International Conference on New Horizons in Biotechnology held at Trivandrum, from 26-29th November, 2007.
9. Attended International Herbal Conference held at Bangalore, from 26-28th Feb., 2009.
10. Attended 38th Annual Conference on Yeasts held at Smolenice, Slovak Republic from 11-14th May, 2010. (**Invited speaker**)
11. Attended National Conference on Multidisciplinary Approach in Frontier Areas of Environmental Science and Engineering held at Guru Jambheshwar University of Science & Technology, Hisar, 4-5 March, 2011.
12. Attended National Seminar on Current Trends in Pharmaceutical Education & Research held at JCD Memorial College of Pharmacy, Sirsa on 12th March, 2011 and delivered invited lecture on "Nutraceuticals for herbal pharmacotherapy". **(Invited Speaker)**
13. Attended 52nd Annual Conference of Association of Microbiologists of India (AMI) "International Conference on Microbial Biotechnology for Sustainable Development" held at Panjab University, Chandigarh from 3-6th November, 2011.
14. Attended National Seminar on "Environmental Degradation: Issues and Remedies" held at D N College, Hisar on 28th February, 2012 and delivered invited lecture on "bioremediation of heavy metal bearing industrial effluent using the sorptive potentials of microorganisms" **(Invited Speaker)**

15. Attended National Seminar on "Recent Developments from Drug Discovery to Drug Delivery" held at Lord Shiva College of Pharmacy, Sirsa from 28 -29th April, 2012 and delivered invited lecture on "Solid state fermentation for the production of nutritionally enriched food: Role of antioxidants" **(Invited Speaker)**
16. Attended "International Conference on Biotechnology" held at Chaudhary Devi Lal University, Sirsa from 18-20th September, 2012. **(Best Poster Award)**
17. Attended "International Conference on Industrial Biotechnology" held at Punjabi University, Patiala from 21-23rd November, 2012 and delivered invited lecture on "Solid State Fermentation for the Production of Nutritionally Enriched Foods" **(Invited Speaker)**
18. Attended "National Seminar on Recent Trends in Science and Technology" organized by the Faculties of Physical Sciences and Life Sciences, Chaudhary Devi Lal University, Sirsa on Feb. 21, 2015.
19. Attended "National Conference on Biotechnology" held at Chaudhary Devi Lal University, Sirsa from 11-12th February, 2016. **(Best Poster Award)**
20. Attended National Seminar on "Biodiversity Conservation in a Megadiverse Country: Issues, Challenges & Solutions" held at Government College for Girls, Ludhiana on 16th February, 2018 and delivered lecture on "Role of Biotechnology for Conservation of Biological Materials" **(Resource Person)**
21. Attended International Conference on "Bio and Nano Technologies for Sustainable Agriculture, Food, Health, Energy and Industry (ICNN-2018)" jointly organized by Department of Bio and Nanotechnology, GJUS&T, Hisar and Society for Sustainable Agriculture & Resource Management on Feburary 21-23, 2018 **(Rapporteur)**
22. Attended National Conference on "Plant Sciences: Network in Health and Environment" held at Khalsa College, Amritsar October 30-31, 2018 and delivered lecture on "Modulation of Nutritional value of Grains using Solid State Fermentation" **(Resource Person)**

CONFERENCES/ WORKSHOPS ORGANIZED

Convener of the "International Conference on Biotechnology" organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa from 18-20th September, 2012.

Co-Convener of the "Science Conclave, 2014 organized by the Faculties of Physical Sciences and Life Sciences, Chaudhary Devi Lal University, Sirsa on Feb. 28, 2014.

Co-Convener of the "National Conference on Biotechnology organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa from 11-12th February, 2016.

Organizing Secretary of the Workshop on "Patent Awareness" organized by Department of Biotechnology, Chaudhary Devi Lal University, Sirsa on March 19, 2016.

Reviewer for scientific peer reviewed journals

- Journal of Basic Microbiology (Wiley-VCH, Germany)
- Annals of Applied Biology (Wiley-VCH, Germany)
- African Journal of Microbiology Research

- Frontiers in Life Sciences (Taylor & Francis)
- Journal of Food Measurement and Characterization (Springer)
- Resource Efficient Technologies (Elsevier)

Member of Editorial Board of scientific peer reviewed journals

- British Journal of Pharmacology and Toxicology

LIST OF PUBLICATIONS OF DR. RAJ KUMAR SALAR

1. Chaudhary, A., Kumar, N., Kumar, R. and Salar, R.K. (2019) Antimicrobial activity of zinc oxide nanoparticles synthesized from Aloe vera peel extract. *SN Applied Sciences*. 1;136 doi.org/10.1007/s42452-018-0144-2

2. Purewal, S.S., Sandhu, K.S., **Salar, R. K.** and Kaur, P. (2019) Fermented pearl millet: a product with enhanced bioactive compounds and DNA damage protection activity. *Journal of Food Measurement and Characterization*. 1-10. doi.org/10.1007/s11694-018-9992-0

3. Kaur, P., Purewal, S.S., Sandhu, K.S., Kaur, M. and **Salar, R. K.** (2019) Millets: a cereal grain with potent antioxidants and health benefits. *Journal of Food Measurement and Characterization*. 13(1): 793-806. doi.org/10.1007/s11694-018-9992-0

4. Kaur, P., Dhull, S.B., Sandhu, K.S. **Salar, R. K.** and Purewal, S.S. (2018) Tulsi (*Ocimum tenuiflorum*) seeds: in vitro DNA damage protection, bioactive compounds and antioxidant potential. *Journal of Food Measurement and Characterization*. 12(3): 1530-1538. doi.org/10.1007/s11694-018-9768-6

5. Salar, R.K. and Kumar, N. (2018) Chitosan Nanoparticles as Carrier for Anticancer Drugs: An Overview. In: *Advances in Animal Biotechnology and its Applications* **(**S.K. Gahlawat, R.K. Salar, P. Siwach, J.S. Duhan, S. Kumar, P. Kaur Eds.), pp. 17-57. Springer Nature, Singapore ISBN:978-981-10-4701-5.

6. Kumar, R., **Salar, R.K**., Kumar, A., Kumar, A. and Chhokar, V. (2018) A low cost, high throughput gel electrophoresis method for separation of SSR markers in *Aloe vera*. *The Pharma Innovation Journal*. 7(3): 622-627.

7. Dahiya, R. **Salar, R.K.**, Mandal, K.D., Kumar, R., Tripathi, B.N., Pal Y. and Kumar, S. (2018) Risk factor analysis associated with *Theileria equi* infected equines in semi-arid and sub-humid ecological enzootic zones of India. *Veterinary Parasitology: Regional Studies and Reports*. 12: 17-21. doi.org/10.1016/j.vprsr.2018.01.005

8. Kumar, N., **Salar, R.K.**, Prasad, M. and Ranjan, K. (2018) Synthesis characterization and anticancer activity of vincristine loaded folic acid–chitosan conjugated nanoparticles on NCL-H460 non-small cell lung cancer cell line. *Egyptian Journal of Basic and Applied Sciences*. 5:87-99. https://doi.org/10.1016/j.ejbas.2017.11.002

9. Kumar, N., **Salar, R. K.**, Kumar, R., Prasad, M., Brar, B. and Nain, V. (2017) Green synthesis of silver nanoparticles and its applications—A review. *Nano Trends: A Journal of Nanotechnology and Its Applications*. 19(3): 1–22.

10. Singh, A., Kumar, M. and **Salar, R.K.** (2017) Isolation of a Novel Antimicrobial Compounds Producing Fungus *Aspergillus niger* MTCC 12676 and Evaluation of its Antimicrobial Activity against Selected Pathogenic Microorganisms. *Journal of Pure and Applied Microbiology*. 11(3): 1457-1464. http://dx.doi.org/10.22207/JPAM.11.3.29

11. **Salar, R. K.,** Purewal, S.S. and Sandhu, K.S. (2017) Fermented pearl millet (*Pennisetum glaucum*) with in vitro DNA damage protection activity, bioactive compounds and antioxidant potential. *Food Research International*. 100: 204-210. doi.org/10.1016/j.foodres.2017.08.045

12. **Salar, R. K.,** Purewal, S.S. and Sandhu, K.S. (2017) Relationships between DNA damage protection activity, total phenolic content, condensed tannin content and antioxidant potential among Indian barley cultivars. *Biocatalysis and Agricultural Biotechnology*. 11:201-206. doi.org/10.1016/j.bcab.2017.07.006 **(2 citation)**

13. **Salar, R. K.,** Purewal, S.S. and Sandhu, K.S. (2017) Bioactive profile, free-radical scavenging potential, DNA damage protection activity, and mycochemicals in Aspergillus awamori (MTCC 548) extracts: a novel report on filamentous fungi. *3 Biotech*. 7: 164. doi:10.1007/s13205-017-0834-02 **(2 citations)**

14. Kumar, S. and **Salar, R.K.** (2017) Control of Gene Expression by RNAi: A Revolution in Functional Genomics. In: *Plant Biotechnology: Recent Advancements and Developments* **(**S.K. Gahlawat, R.K. Salar, P. Siwach, J.S. Duhan, S. Kumar, P. Kaur Eds.), pp. 17-57. Springer Nature, Singapore ISBN: 978-981-10-4731-2.

15. **Salar, R. K.** and Purewal, S.S. (2017) phenolic content, antioxidant potential and DNA damage protection of pearl millet (*Pennisetum glaucum*) cultivars of North Indian region. *Journal of Food Measurement and Characterization*. 11: 126-133. doi: 10.1007/s11694-016-9379-z **(7 citations)**

16. Singh, Varinder; Singh, Baldev; Sharma, Ashutosh; Kaur, Kulwinder; Gupta, Ajai; **Salar, R. K.**; Hallan, Vipin; Pati, Pratap (2017) Leaf spot disease adversely affects human health promoting constituents and withanolide biosynthesis in *Withania somnifera* (L.) Dunal. *Journal of Applied Microbiology*. 122: 153-165. doi: 10.1111/jam.13314 **(1 citation)**

17. Mukesh Kumar, A. Singh, V. Beniwal and **R. K. Salar** (2016) Improved production of tannase by *Klebsiella pneumoniae* using Indian gooseberry leaves under submerged fermentation using Taguchi approach. *AMB Express*. 6:46 doi:10.1186/s13568-016-0217-9 **(3 citations)**

18. **Salar, R. K.,** and Kumar, N. (2016) Synthesis and characterization of vincristine loaded folic acid–chitosan conjugated nanoparticles. *Resource-Efficient Technologies*. 2 (4): 199-214. doi: 10.1016/j.reffit.2016.10.006 **(1 citation)**

19. **Salar, R. K.** and Purewal, S.S. (2016) Improvement of DNA damage protection and antioxidant activity of biotransformed pearl millet (Pennisetum glaucum) cultivar PUSA-415 using *Aspergillus oryzae* MTCC 3107. *Biocatalysis and Agricultural Biotechnology*.8:221-227. doi: 10.1016/j.bcab.2016.10.005 **(3 citations)**

20. **Salar, R. K.,** Purewal, S. S. and Bhatti, M.S. (2016) Optimization of extraction conditions and enhancement of phenolic content and antioxidant activity of pearl millet fermented with *Aspergillus awamori* MTCC-48. *Resource-Efficient Technologies.*2(3):148-157.http://dx.doi.org/10.1016/j.reffit.2016.08.002**(9 citations)**

21. **Salar, R. K.,** Sharma, P. and Kumar, N. (2015) Enhanced antibacterial activity of streptomycin against some human pathogens using green synthesized silver nanoparticles. *Resource-Efficient Technologies*. 1: 106-115. doi: 10.1016/j.reffit.2015.11.004 **(8 citations)**

22. Mukesh Kumar, V. Beniwal and **R. K. Salar** (2015) Purification and characterization of thermophilic tannase from *Klebsiella pneumoniae* KP715242. *Biocatalysis and Agricultural Biotechnology*. 4: 745-751. doi:10.1016/j.bcab.2015.10.011 **(2 citations)**

23. Mukesh Kumar, Shiny Rana, Vikas Beniwal and **R. K. Salar** (2015) Optimization of tannase production by a novel *Klebsiella pneumoniae* KP715242 using central composite design. *Biotechnology Reports*. 7: 128-134. doi.10.1016/j.btre.2015.06.002 **(11 citations)**

24. **Salar, R. K.,** Sharma, P. and Purewal, S. S. (2015) In vitro antioxidant and free radical scavenging activities of stem extract of *Euphorbia trigona* Miller. *TANG*. **5(2):** 53-58. doi:http://dx.doi.org/10.5667/tang.2015.0004 **(3 citations)**

25. Verma, S. K., Dhanda, M. and **Salar, R. K.** (2015) Analysis of genetic diversity among Asiatic cotton (Gossypium arboretum L.) cultivars and breeding lines using RAPD and SSR markers. *Int. J. Adv. Res. Biol. Sci*. **2(3):** 114-122.

26. Jyoti Joshi, **R. K. Salar**, Priyanka Banerjee, Upasna S, M. S. Tantia, and R. K. Vijh (2015) Assessment of Genetic Variability and Structuring of Riverine Buffalo Population (Bubalus bubalis) of Indo-Gangetic Basin. *Animal Biotechnology*. **26(2)**: 148-155. http://dx.doi.org/10.1080/10495398.2014.955613

27. Rani, R.; Kumar, H.; **Salar, R. K**. and Purewal, S. S. (2014) Antibacterial activity of copper oxide nanoparticles against gram negative bacterial strain synthesized by reverse micelle technique. *International Journal of Pharmaceutical Research and Development.* **6(1)**: 72-78. **(8 citations)**

28. Deepika and **Salar R. K.** (2014) Genetic Diversity Analysis of ten Indigenous Grey Cattle Breeds (*Bos indicus*) from different Agroclimatic regions of India using

Microsatellite Markers. *DHR International Journal of Biomedical and Life Sciences*. 5**(1)**: 297-313.

29. Deepika and **Salar R. K.** (2014) Polymorphism studies of Prolactin Receptor (PRLR) gene in Indigenous Grey Cattle breeds of India. *DHR International Journal of Biomedical and Life Sciences*. 5**(1)**: 314-321. **(1 citation)**

30. Bansal, P. Bharadwaj, L.M., Deep, A., S.K. Rohilla, and **Salar, R.K.** (2013) Metal organic frameworks: New smart material for biological application pp 183-195. In: Biotechnology: Prospects and applications (**R.K. Salar**, S.K. Gahlawat, P. Siwach, J.S. Duhan Eds.) Springer. DOI 10.1007/978-81-322-1683-4_14.

31. Jyoti Joshi, **R. K. Salar**, Priyanka Banerjee, Upasna S, M. S. Tantia, and R. K. Vijh (2013) Genetic variation and phylogenetic relationships of Indian buffaloes of Uttar Pradesh. *Asian Australasian Journal of Animal Sciences*, 26(9): 1229-1236. dx.doi.org/10.5713/ajas.2012.12669 **(3 citations)**

32. **Salar R. K.;** Certik, M; Brezova, V.; Brlejova, M.; Hanusova, V. and Breierová, E. (2013) Stress influenced increase in phenolic content and radical scavenging capacity of *Rhodotorula glutinis* CCY 20-2-26. *3Biotech*. **3**: 53-60. DOI: 10.1007/s13205-012-0069-1. **(Award winning paper)** **(4 citations)**

33. Deepika and **Salar R. K.** (2013) Genetic diversity and relationship among Ghumsari, Binjharpuri, and Hariana breeds using microsatellite markers. *Indian Journal of Dairy Science*. **66(4)**: 294-302.

34. Deepika and **Salar R. K.** (2013) Low differentiation despite high genetic diversity in five Zebu Cattle (*Bos indicus*) breeds native to North and Western parts of India. *DHR International Journal of Biomedical and Life Sciences*. 4**(2)**: 248-269.

35. **Salar R. K.**, Milan Certik and Vlasta Brezova (2012) Modulation of phenolic content and antioxidant activity of maize by solid state fermentation with *Thamnidium elegans* CCF 1456. *Biotechnology and Bioprocess Engineering*. **17**: 109-116. DOI 10.1007/s12257-011-0455-2**(22 citations)**

36. **Salar R. K.**, Jitender Kumar and Suresh Kumar (2012) Isolation and evaluation of fungal strains from textile effluent disposal sites for decolorization of various azo dyes. *Terrestrial and Aquatic Environmental Toxicology*. **6** (2): 96-99. **(1 citation)**

37. Deepika and Salar**, R.K.** (2012) Genetic diversity and bottleneck analysis of indigenous grey cattle breeds of India based on microsatellite data. *DHR International Journal of Biomedical and Life Sciences*. **3(1)**: 184-194. **(2 citations)**

38. Joshi, J.; **Salar, R.K.**; Banerjee, P.; Sharma, U.; Tantia, M.S. and Vijh, R.K. (2012) Comparative evaluation of Murrah breeds with buffaloes of Indo-Gangetic Plains. *DHR International Journal of Biomedical and Life Sciences*. **3(1)**: 93-105. **(2 citations)**

39. Dilip Markandey, **R. K. Salar**, N. Markandey and R C Trivedi (2012) Remediation of environmental pollutants by microorganisms. *Indian journal of Environmental Protection*. **32(8)**: 665-682.

40. Joshi, J.; **Salar, R.K.**; Banerjee, P.; Gokhale, S.B.; Sharma, U.; Gaur, U.; Tantia, M.S. and Vijh, R.K. (2012) Microsatellite analysis of buffaloes of Indo-Gangetic Plains. *Indian Journal of Animal Sciences*. **82**(11): 1434-1437.

41. Rohilla, S.K. and **Salar R.K.** and Kumar J. (2012) Optimization of Physiochemical Parameters for Decolorization of Reactive Black HFGR Using Soil Fungus, *Aspergillus allhabadii* MTCC 9988. *J Bioremediation Biodegradation* **3**:153. doi:10.4172/2155- 6199.1000153**(8 citations)**

42. Rohilla, S.K. **Salar R.K.,** Kumar J. and Bansal P. (2012) Evaluation of different *Aspergillus* species for degradation of a reactive dye, Orange M2R. *Annals of Biological Research.* **3(9):** 4491-4496. **(6 citations)**

43. Rohilla, S.K. and **Salar R.K.** (2012) Isolation and Characterization of Various Fungal Strains from Agricultural Soil Contaminated with Pesticides. *Research Journal of Recent Sciences*. **1**: 297-303. **(15 citations)**

44. **Salar R.K.,** Rohilla, S.K. and Kumar J. (2012) Decolorization of Reactive Black HFGR by *Aspergillus sulphureus*. *Annals of Biological Research* **3(8):** 3811-3817. **(11 citations)**

45. Namdhari, B.S.; Rohilla S.K.; **Salar R.K**.; Gahlawat S.K.; Bansal P. and Saran A.K. (2012) Decolorization of Reactive Blue MR using *Aspergillus* species Isolated from Textile Waste Water. *ISCA Journal of Biological Sciences.***1(1):** 24-29 **(18 citations)**

46. Rohilla, S. K. and **Salar, R. K.** (2012) Isolation and characterization of indigenous fungi from soil contaminated with pesticides. In: *Energy-Water-Waste Nexus for Environmental Management* (Eds. Devi, R; Kidwai, M.K.; Rose, P.K.; Saran, A.K.). Narosa Publishing House, New Delhi, pp: 71-76.

47. Chadda, B. S.; Rohilla, S. K.; **Salar, R. K.** and Gahlawat, S, K. (2012) Isolation and evaluation of *Aspergillus niger* in decolorization of reactive textile dyes. In: *Energy-Water-Waste Nexus for Environmental Management* (Eds. Devi, R; Kidwai, M.K.; Rose, P.K.; Saran, A.K.). Narosa Publishing House, New Delhi, pp: 185-188.

48. **Salar R. K.**, Leena Seasotiya, Jyoti Yadav and Mohd. Mujeeb (2012) Efficacy of different extraction procedures on antibacterial activity of stem bark of *Butea monosperma* (Lam.) Kuntze. *Indian Journal of Natural Products and Resources*. **3(4):** 551-556. A61K 36/48, A61K 129/00, A61P 31/00

49. **Salar R. K.** and Leena Seasotiya (2011) Free radical scavenging activity, phenolic contents and phytochemical evaluation of different extracts of stem bark of *Butea monosperma* (Lam.) Kuntze. *Frontiers in Life Science.* **5:3-4** 107-116. doi.org/10.1080/21553769.2011.635813 **(15 citations)**

50. Deepika, Prakash, B. and **Salar R. K.** (2011) Genetic diversity analysis of newly recognized Ghumusari Cattle breed and its relationship with Hariana. *Indian Journal of Dairy Science*. **64(4)**: 315-322.

51. **Salar R. K.**, Leena Seasotiya and S. K. Rohilla (2011) Evaluation of antioxidant activity and radical scavenging property of *Ficus bengalensis* L. applying various spectroscopic and spin trapping methods. *Journal of Biologically Active Products from Nature.* **1(4)**: 248-261. DOI: 10.1080/22311866.2011.10719092 **(2 citations)**

52. Dilip Markandey, **R. K. Salar**, N. Markandey and R C Trivedi (2011) Removal and recovery of lead from diluted effluent from storage battery manufacturing unit by lab developed fungal test biosorbent**.** *Journal of Indian Association of Environmental Management*, **38(2)**: 97-104.

53. Kumar H., Rani R. and **Salar R. K.** (2011) Synthesis of nickel hydroxide nanoparticles by reverse micelle method and its antimicrobial activity. *Research Journal of Chemical Sciences*. **1(9)**: 42-48. **(13 citations)**

54. Dilip Markandey, **R. K. Salar**, N. Markandey and R C Trivedi (2011) Suitability of *Rhizopus stolonifer* for removal- and recovery of Cr (T) from dilute Tannery Effluent. *Indian journal of Environmental Protection*. **31(7)**: 560-568. **(1 citation)**

55. Dilip Markandey, **R. K. Salar**, R.C. Trivedi, Neelima Markandey, S. K. Maiti, Anil Prakash, B.K. Choudhury, Jagdish, and Gurdeep Singh (2011) Suitability of *Trichderma viridae* for removal and recovery of Cd, Cu, Co, Cr(T), Ni and Zn from multimetallic aqueous environment. *Indian Journal of Environmental Protection.* **31(4)**: 301-314.

56. Dilip Markandey, **R. K. Salar**, Neelima Markandey and R.C. Trivedi (2011) Acclimatization of microbial consortia for biosorption/ bioaccumulation of some metallic contaminants in a soil perfusion system. *Indian Journal of Environmental Protection.* **31(1)**: 39-51.

57. Dilip Markandey, **R. K. Salar**, N. Markandey and R C Trivedi (2011) Biosorption of Cr (VI), Cu, Cd and Zn from Diluted Electroplating Effluent by a Test Biosorbent of Microbiological Origin. *Journal of Indian Association of Environmental Management*, **38(1)**: 30-39.

58. Dilip Markandey, **R. K. Salar**, N. Markandey and R. C. Trivedi (2010) Biosorbents for Remediation of Heavy Metals Bearing Effluents: A Review. *Journal of Indian Association of Environmental Management*, **37(2&3)**: 142-162.

59. Kumar, H.; Rani, R. and **Salar, R. K**. (2010) Reverse micellar synthesis, characterization & antibacterial study of nickel nanoparticles. In: Advances in Control, Chemical Engineering, Civil Engineering and Mechanical Engineering. Pp 88-94.WSEAS Press **(6 citations)**

60. **Salar, R.K.** and Dhall, A. (2010) Antimicrobial and free radical scavenging activities of acetone extracts/fractions of some Indian medicinal plants. *Journal of Medicinal Plants Research*. **4(22)**: 2313-2320.doi: 10.5897/JMPR10.155 **(12 citations)**

61. Chhokar, V.; Seema; Beniwal, V.; **Salar, R. K.**; Nehra, K.S.; Kumar, A. and Rana, J. S. (2010) Purification and characterization of extracellular tannin acyl hydrolase from *Aspergillus heteromorphous* MTCC 8818. *Biotechnology and Bioprocess Engineering,* **15 (5)**: 793-799. DOI: 10.1007/s12257-010-0058-3 **(30 citations)**

62. Prakash, B.; Deepika and **Salar, R. K.** (2010) Minor differentiation despite high genetic diversity among closely related Hariana and Mewati cattle breeds from northern India. *Journal of Livestock Biodiversity*, **2 (1)**: 7-14.

63. Dilip Markandey, **Raj Kumar Salar**, R.C. Trivedi, S. K. Maiti, Neelima Markandey, Anil Prakash, B.K. Choudhury, I. Haq, Jagdish, and Gurdeep Singh (2010) Heavy metals biosorption by formalin treated non-viable biomass of various microbial isolates in single metallic aqueous environment. *Indian Journal of Environmental Protection.* **30(9)**: 733-745.

64. Dilip Markandey, **R. K. Salar**, Neelima Markandey and R.C. Trivedi. (2010) Bioremediation of heavy metals by microorganisms and their derivatives from aqueous system: Present scenario and future scope of separation biotechnology in environmental management. *Indian Journal of Environmental Protection*, **30(11)**: 898-920.

65. **Salar, R.K.** and Suchitra (2009) Evaluation of antimicrobial potential of different extracts of *Solanum xanthocarpum* Schrad. & Wendl. *African Journal of Microbiology Research,* **3(3)**:97-100. **(26 citations) (Impact Factor: 0.565)**

66. Pati, P.K.; Sharma, M; **Salar, R.K**.; Sharma, A.; Gupta, A.P. and Singh, B. (2008) Studies on leaf spot disease of *Withania sominifera* and its impact on secondary metabolites. *Indian Journal of Microbiology*. **48**: 432-437. DOI: 10.1007/s12088-008-0053-y **(36 citations)**

67. **Salar, R. K.** and Aneja, K. R. (2007) Significance of thermophilic fungi in mushroom compost preparation: effect on growth and yield of *Agaricus bisporus* (Lange) Sing. *Agricultural Technology*, Bangkok **3(2)**: 241-253. **(15 citations)**

68. **Salar, R. K.** and Aneja, K. R. (2007) Thermophilic fungi: Taxonomy and Biogeography. *Journal of Agricultural Technology*, Bangkok **3(1)**: 77-107. **(52 citations)**

69. **Salar, R. K.** and Aneja, K. R. (2006) Thermophilous fungi from temperate soils of northern India. *Journal of Agricultural Technology*, Bangkok **2(1)**: 49-58. **(9 citations)**

70. Aneja, K. R. and **Kumar, R**. (2000) Biotechnological and Industrial Applications of Thermophilic Fungi – A Review. pp. 42-55, In: *Glimpses in Plant Sciences* (Eds. K.R. Aneja, M.U. Charaya, A. Aggarwal, D.K. Hans and S.A. Khan), *Vasundera Press*, Meerut.

71. **Kumar, R.** and Aneja, K. R. (1999) Biotechnological applications of thermophilic fungi in mushroom compost preparation. pp. 115-126, In: *From Ethnomycology to Fungal Biotechnology* (Eds. J. Singh and K.R. Aneja), Plenum Publishers, U. K. **(1 citation)**

72. Aneja, K. R. and **Kumar, R**. (1999) *Synnmukerjiomyces thermophile* a new thermophilic hyphomycete from India. pp. 1-5, In: *Advances in Microbial Biotechnology* (Eds. J.P. Tewari, T.N. Lakhanpal, J. Singh, Rajni Gupta and B.P. Chamola), A.P.H. Publishing Corporation, New Delhi.

73. **Kumar, R**. and Aneja, K. R. (1999) Influence of incubation temperature on growth rates of fifteen thermophilous fungi. *Journal of Mycopathological Research*. **37** (1): 5-8. **(2 citations)**

74. Aneja, K. R.; Kaushal, S.; **Kumar, R**. and Khan, S. (1999) A new host record of *Myrothecium roridum* from India. *Journal of Mycopathological Research*. **37** (2): 87-88.

75. Sigler, L.; Aneja, K. R.; **Kumar, R.**; Maheshwari, R. and Shukla R. V. (1998) New records from India and redescription of *Corynascus thermophilus* and its anamorph *Myceliophthora fergusii*, *Mycotaxon*, USA **68**: 185-192 **(7 citations)**

76. Aneja, K. R. and **Kumar, R**. (1994) *Chaetomium senegalense* – A new record from India. *Proc. Nat. Acad. Sci*., India **64** (B) II: 229-230.

PAPERS PRESENTED AT CONFERENCES

77. Decomposition of wheat straw cellulose by pure and mixed cultures of thermophilous fungi. (**Kumar, R.** and Aneja, K. R.), Botanical Conference of the Indian Botanical Society, held at Dept. of Botany, Punjab University, Chandigarh, Oct. 21-23, 1994.

78. Thermophilic molds: Growth, amylase and pH relationships. (Aneja , K. R. and **Kumar, R**.), Annual Conference of Association of Microbiologists of India, held at Dept. of Microbiology, C.C.S.H.A.U., Hisar, 8-10 Nov., 1995.

79. Biotechnological applications of thermophilic moulds in mushroom compost preparation. (**Kumar, R.** and Aneja, K. R), First International Conference on "From Ethnomycology to Fungal Biotechnology held at Holiday Home, Shimla, 15-16 Dec., 1997.

80. Isolation and characterization of thermophilic fungi from temperate soil of north India.(**Kumar, R**.), 7th International Mycological Congress, held at University of Oslo, Oslo **(Norway)** 11-17 Aug. 2002.

81. Isolation and characterization of thermophilous fungi from north Indian soils. (**Salar, R. K.**) 10th International Congress for Culture Collections, Tsukuba **(Japan)** 10 - 15th Oct. 2004.

82. Bioinformatics and IPR for successful biotechnology (Raj Kumar), National Conference on "Bioinformatic Computing", held at Chaudhary Devi Lal University, Sirsa, 19th February, 2006.

83. *In vitro* antimicrobial properties of *Solanum xanthocarpum* Schrad. & Wendl. (**Salar, R.K**. and Suchitra) 4th International Conference on New Horizons in Biotechnology held at Trivandrum, from 26-29th November, 2007.

84. Evaluation of antimicrobial and antioxidant potential of some Indian medicinal plants. (**Salar, R.K.** and Anjali Dhall) International Herbal Conference held at Bangalore from 26-28th Feb., 2009.

85. The Role of stress factors in enhancing phenolic content and radical scavenging capacity of *Rhodotorula glutinis* CCY 20-2-26 (**Raj Kumar Salar**, Milan Certik, Vlasta Brezova, Marta Brlejova and Vladimira Hanusova) 38th Annual Conference on Yeasts held at Smolenice, Slovak Republic from 11-14th May, 2010.

86. Isolation and characterization of various fungal strains from pesticide contaminated soils for their use in bioremediation (Suresh Kumar Rohilla and **Raj Kumar Salar**) "National Conference on Multidisciplinary Approach in Frontier Areas of Environmental Science and Engineering" held at Guru Jambheshwar University of Science & Technology, Hisar from 4-5 March, 2011.

87. Nutraceuticals for herbal pharmacotherapy **(Raj Kumar Salar) "**National Seminar on Current Trends in Pharmaceutical Education & Research" held at JCD Memorial College of Pharmacy, Sirsa on 12th March, 2011. **(Invited Speaker)**

88. Enhancement of phenolic content and free radical scavenging activity of corn by solid state fermentation with *Thamnidium elegans* CCF 1456 (**Raj Kumar Salar**, Suresh Kumar Rohilla and Sukhvinder Singh Purewal) "International Conference on Microbial Biotechnology for Sustainable Development" held at Panjab University, Chandigarh from 3-6th November, 2011.

89. Bioremediation of heavy metal bearing industrial effluent using the sorptive potentials of microorganisms (**Raj Kumar Salar**) National Seminar on "Environmental Degradation: Issues and Remedies" held at D N College, Hisar on 28th February, 2012. **(Invited Speaker)**

90. Solid state fermentation for the production of nutritionally enriched food: Role of antioxidants (**Raj Kumar Salar**) National Seminar on "Recent Developments from Drug Discovery to Drug Delivery" held at Lord Shiva College of Pharmacy, Sirsa from 28 -29th April, 2012. **(Invited Speaker)**

91. "Solid State Fermentation for the Production of Nutritionally Enriched Foods" Attended (**R. K. Salar**) "International Conference on Industrial Biotechnology" held at Punjabi University, Patiala from 21-23rd November, 2012 **(Invited Speaker)**

Popular Science Article

92. **Kumar, R**. and Aneja K. R. (1999) Mushroom – A nutritive food. *The Tribune*, Dt. 3 April, 1999.