#### RESUME

#### Name and Address:

Dr. Santosh Kumar Singh

#### **Senior Scientist**

Centre of Experimental Medicine and Surgery (CEMS) Faculty of Medicine, Institute of Medical Sciences Banaras Hindu University, Varanasi-221005, India

#### Contacts:

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## **Personal Profile:**

Father's Name : Late Shri Jainath Singh

Date of Birth : 12.05.1971

Pay Band Plus Grade Pay: PB - IV (Rs. 37400-67000) + GP Rs. 10000/-

Revised Pay: Level - 14 (144200-218200)

### **Academic Profile:**

**B.Sc.** 1990 : Botany, Zoology, Chemistry,

**M.Sc.** 1992 : Botany

Ph.D. 1998 : Botany, Banaras Hindu University, Varanasi, U.P.

**Thesis Title:** Alkaline phosphatase activities of the N<sub>2</sub>–fixing cyanobacterium *Anabaena* 

oryzae Fritsch.

# Research Area: Drug Discovery & Development

Microbial Biotechnology: Exploration of 'microbial endophytes' as alternative source of

pharmaceutically important chemicals

Ethanopharmacology : Scientific validation of traditionally used herbal medicine

Nanobiotechnology : Bio-fabrication of highly structured nanomaterial and

their evaluation for biomedical applications.

#### Awards & Honors:

## **National Awards:**

- Research Associate (RA, CSIR) New Delhi, (13.12.2000 to 27.10.2005).
- Research Associate at National Centre for Conservation and Utilization of Blue Green Algae (NCCUBGA), Indian Agricultural Research Institute (IARI), New Delhi, (10.05.2000 to 12.12.2000).
- Senior Research Fellowship (SRF, CSIR), Council of Scientific and Industrial Research, New Delhi, (01.04.1998 to 08.05.2000).
- **B.H.U. Research Fellowship** (01.09.1995 to 30.03.1998).

#### International Award:

• Post-Doctoral Research Associateship in Department of Photosynthesis, Institute of Physical Biology, **University of South Bohemia**, **Czech Republic** (2003).

• Invited as session speaker in 3<sup>rd</sup> International conference on Biopharmaceutics and Biologic drugs held during 31-08-2017 to 01-09-2017 in **Philadelphia**, **USA**.

#### **Research Profile:**

Total Research Experience : 24 years

Total Publications : 69
International Publications : 35
National Publications : 34
Books (International) : 01

# **Professional Achievements:**

**Established Cell Culture Facility & Drug Standardization Facility** 

#### **RESEARCH GUIDING EXPERIENCE:**

PhD : 05 Awarded & 04 in progress MD (Ay.)/DM : 06 Awarded & 01 in progress

MSc : 05 Awarded

# Research Projects as PI:

- Isolation and characterization of microbial endophytes for novel anti-microbial compounds from selected medicinal plants of Varanasi region. Department of Science and Technology (DST), New Delhi, India (2013). Total value Rs.31,20000.00 (Completed)
- Socio-economical uplifting of rural women by cultivation and processing of some selected medicinal plants in Chandauli district, Eastern Uttar Pradesh **Department of Science** and **Technology** (DST), SEED Program, New Delhi, India . Total value **Rs. 32,1200.00** (On-Going)

# Conferences and symposia:

Total conference organized : 01 as Coordinator, IMS, for Kashi Katha-2016 "

Varanasi in 21st Century"

Total conference attended so far : **57** Invited speaker : **21** 

#### **Professional Activities:**

### **Editorial board Member:**

- 1. Experimental Medicine, Renaissance Medical Publishing, Greece
- 2. International Journal of Biotechnology, Eastern Capes, South Africa
- 3. International journal of Biotechnology and Molecular Biology Research, Nairobi, Victoria Island
- 4. Medha international journal of multidisciplinary researches: Varanasi, India

# **Programmed Organized/Participated:**

 Lectures and training regarding food adulteration and health (MILAVAT HATAO SWASTHYA BACHAO). **2.** Lectures regarding Science awareness among school students, teachers & Scheduled Caste Population for understanding the application of science and technology: in rural areas of eastern Uttar Pradesh.

# **Administrative Experience:**

Administrative In-charge : Centre of Experimental Medicine and Surgery, IMS, BHU

Since 17 May 2013-continue

**Proctor**: Proctorial Board of Banaras Hindu University, for Three Years

Coordinator : Election procedure of Student council of IMS, BHU

Program Officer (NSS) : National Service Scheme (NSS), IMS, BHU

**Centre superintendent** : Screening/selection of the laboratory attendant, IMS, BHU

# LIST OF PUBLICATION

INTER	NATIONAL PUBLICATIONS			ANNEXURE-I
S.I.	Authors/Title/Vol./Page No.	Journal/Book	Year	Impact Factor/ Peer Reviewed
1	Singh RK, Ranjan A, Srivastava AK, Monica, Shukla AK, Atri N, Mishra A, Singh AK and <b>Singh SK</b> .Cytotoxic and Apoptotic potential of Amoora rohituka Leaf Extracts in Human Brest Cancer Cells.	J Ayurveda Integr Med. (Elsevier)	2019	0.83
2	Singh V, Kashyap S, Yadava U, Srivastava A, Singh AV, Vikram T, Singh RK, <b>Singh SK</b> , Saxena P. Nitrogen doped carbon quantum dots demonstrate no toxicity under in vitro condition in cervical cell line and in vivo in Swiss albino mouse.	Toxicol. Res. Royal Society of Chemistry	2018	1.890
3	Srivastava S, Kamthania M, Pandey RK, Saxena AK, Saxena V, <b>Singh SK</b> , Sharma RK, Sharma N. Design of novel multi-epitope vaccines against Severe Acute respiratory syndrome validated through multistage molecular interaction and dynamics.	Journal of Biomolecular Structure and Dynamics TBSD Taylor & Francis	2018	3.107
4	Singh AK, Awasthi R, Mishra G, Maury A, Kumari K, Thakur A, Rai A, Rai GK, Sharma B, Kulkarni GT and <b>Singh SK</b> . Role of TREM2 in Alzheimer's disease and its consequences on β-amyloid Tau and neurofibrillary tangles.	Current Alzheimer Research, Bentham Science Publishers	2018	3.595
5	Monika, Singh RK, <b>Singh SK</b> Mahto S & Misra N. In vitro biocompatibility analysis of functionalized poly(vinyl chloride)/layered double hydroxides nanocomposites.	Royal Society of Chemistry, RSC Advance	2018	3.289
6	Sharma R, Kapusetti G, Bhong SY, Roy P, Singh SK, Singh S, Ray B, Maiti P and Misra N. Osteoconductive induced Amine Functionalized Graphene- Poly(methylmethacrylate) Bone Cement with Controlled Exothermic Polymerization	ACS Bioconjugate Chemistry	2017	4.485
7	Patel DK, Singh RK, Singh SK, Aswal VK, Rana DK, Ray B and Maiti P. Graphene as chain extender of polyurethanes for biomedical applications.	Royal Society of Chemistry, RSC Advance	2016	3.289
8	<b>Singh SK</b> , Verma M, Ranjan A and Singh RK. Antibacterial Activity and Preliminary Phytochemical Screening of Endophytic Fugal Extract of <i>Rauvolfia serpentina</i> .	Bentham Science- The Open Conference Proceedings Journal	2016	Peer Reviewed

9	Pant P, Singh RG, Usha, Singh SK, SinghVP, Doley PK and Sivasankar M. Serum Sodium Dodecyl Sulfate-Polyacrylamide Gel Electrophoresis Analysis of Patients with Membranous Nephropathy and Focal and Segmental Glomerulosclerosis.	Saudi J. Kidney Dis. Transpl.	2016	Peer Reviewed
10	SinghM, MahtoS K, DasS, RanjanA, SinghSK, RoyP and Misra N / Chemical modification of poly(vinyl chloride) for Blood and Cellular Biocompatibility/ DOI: 10.1039/C5RA03362D	Royal Society of Chemistry RSC Advance	2015	3.708
11	Monika, <b>Singh SK</b> and Nira Misra/ Chemical Modification of Poly(vinyl chloride) by Thiourea: Influence of Surface Characteristics/ doi:10.1166/asem.2014.1622	Advanced Science, Engineering and Medicine	2014	Peer Reviewed
12	RanjanA, TripathiJ S, <b>SinghSK</b> / Antibacterial Activity of Extract of Endophytic Fungi of <i>Gymnema sylvestre</i> . DOI:10.1007/s40011-014-0471-z	Proceedings of the National Academy of Sciences, India Section B: Biological Sciences	2014	0.396
13	Verma VC, Gangwar M and <b>Singh SK</b> / Engineered Nanomaterials for Purification and Desalination of Palatable Water.	In 'Nanomaterials for Environmental Protection' eds. Oxana V. Kharissova, Boris I. Kharisov, H.V. RasikaDias. John Wiley & Sons, 2013. ISBN: ISBN: 9781118496978	2013	Peer Reviewed
14	Singh SK, Ranjan A, Singh S, Anand S, Verma VC/ Myconanosynthesis: Redefining the role of microbial endophytes.	In 'Advances in Endophytic Research' Eds. Verma VC and Gange AC, Springer-Verlag, India. ISBN: 978- 81-322-1574-5	2013	Peer Reviewed
15	Verma VC, Anand S, Ulrichs C and <b>Singh SK</b> / Biogenic gold nanotriangles from <i>Saccharomonospora</i> sp., an endophytic actinomycetes of <i>Azadirachta indica</i> A. Juss. 3, 21	International Nano Letters.	2013	Peer Reviewed
16	Gobinda K, Misra N, Singh V, Srivastava S, Roy P, Chakraborty C, Malik S, Maiti P, Singh SK, Mishra R / Layered double hydroxide induced advancement in joint prosthesis using bone cement: The effect of	RSC- J Mat Chem. B.	2013	5.97

	metal substitution. 1/2275-2288			
17	Verma VC, <b>Singh SK</b> , Kharwar RN/ Histological investigation of fungal endophytes in healthy tissues of <i>Azadirachta</i> <i>indica</i> A. Juss. 46, 229-237.	Kasetsart J. (Nat. Sci.)	2012	Peer Reviewed
18	Pandey VD and <b>Singh SK</b> / Microbes and Toxins.	In: Microbial Toxins and Toxigenic Microbes (Eds. Vidya Dhar Pandey and Santosh Kumar Singh), Chapter 1. Studium Press (LLC) Ltd., USA.	2011	Peer Reviewed
19	Prakash S,Verma VC, Pandey VD and <b>Singh SK</b> / Toxic cyanobacterial blooms: occurrence and health risk.	In: Microbial Toxins and Toxigenic Microbes (Eds. Vidya Dhar Pandey and Santosh Kumar Singh), Chapter 23. Studium Press (LLC) Ltd., USA.	2011	Peer Reviewed
20	Singh SK, Pandey VD and Verma VC/Bacterial food intoxication.	In: Microbial Toxins and Toxigenic Microbes (Eds. Vidya Dhar Pandey and Santosh Kumar Singh), Chapter 12. Studium Press (LLC) Ltd., USA.	2011	Peer Reviewed
21	Singh C, <b>Singh SK</b> , Nath G and Rai NP/Antimycobacterial activity of <i>Piper longum</i> L. fruit extracts against multi drug resistant <i>Mycobacterium</i> Spp. 3/353-361.	Int J Phytomed	2011	Peer Reviewed
22	Bajpai S, Mishra M, Kumar H, Tripathi K, <b>Singh SK</b> , Pandey HP and Singh RK/ Effect of selenium on connexin expression, angiogenesis, and antioxidant status in diabetic wound healing 144/ 327-338.	Biol Trace Elem Res	2011	1.923
23	Verma VC, Lobkovsky E, Gange AC, <b>Singh SK</b> , Prakash S/ Piperine production by endophytic fungus <i>Periconia</i> sp. isolated from <i>Piper longum</i> L. 64/ 427-431.	J Antibiotics (NPG)	2011	1.650
24	Verma VC, <b>Singh SK</b> , Prakash S/ Bio-control and plant growth promoting potential of a	J Basic Micro	2011	1.266

	siderophore producing endophytic Streptomyces spp. from <i>Azadirachta indica</i>			
	A. Juss. 51/550-556.			
25	Verma VC, Kharwar RN, <b>Singh SK</b> , Solanki R and Prakash S/ Biofabrication of	Nanoscale Res Lett.	2011	2.9
	anisotropic gold nanotriangles using extract of endophytic <i>Aspergillus clavatus</i> as a dual			
	functional reductant and stabilizer. 6/261			
26	Bajpai S, Mishra M, Katiyar H, Tripathi K,	Dig J Nanomat	2010	1.750
	Singh SK, Shrikrishna S, Pandey HP and	Biostruct		
	Singh RK/ Comparative study of connexins			
	expression in diabeticand nondiabetic			
	wounds. 5/ 857-862.		2010	0.220
27	Katiyar H, Mishra M, Pokharia D, Arya AK,	Diabetes	2010	8.320
	Bajpai S, <b>Singh SK</b> , Singh RK and Tripathi K/sFas-L correlates negatively with insuline			
	resistance in T2DM (A). 59/ A651-A651.			
28	Singh C, Singh SK, Singh KA, Singh A, Nath	Pharmacology	2010	Peer Reviewed
	G,Rai NP/ Inhibitory response of drug	online	2010	1 col 1 co / lo // cu
	resistant bacteria towards methanol extracts of			
	Piper longum fruit. 1/634-643.			
29	Singh SK, Pandey VD, Singh A, Singh C/	African J Biotech	2009	0.572
	Antibacterial activity of seed extracts of			
	Argemone mexicana L. on some pathogenic			
20	bacterial strains. 8/7077-7081.	D: 1 ' T	2000	D D ' 1
30	Kumar A, Singh TD, <b>Singh SK</b> and Prakash S/ Methods, potentials and limitations of gene	Biologic Tars Ther	2009	Peer Reviewed
	delivery to regenerate central nervous system	Iner		
	cells. 2/245-256.			
31	Singh SS, <b>Singh SK</b> and Mishra AK/ Na <sup>+</sup>	Ecotox Environ	2008	2.617
	Regulation by combined nitrogen in Azolla	Safety		
	pinnata-Anabaena azollae symbiotic			
	association during salt toxicity. 69/ 32-38.			
32	Singh SK, Pandey V and Pandey KD/	African J Biotech	2007	0.572
	Phosphate uptake kinetics and its regulation			
	in N <sub>2</sub> -fixing cyanobacterium <i>Anabaena</i> oryzae Fritsch under salt stress. 6/2363-2368.			
33	Singh SK, Singh SS, Pandey VD and Mishra	WorldJ Microb	2006	1.532
33	AK/ Factors modulating alkaline phosphatase	Biotech	2000	1.552
	activity in a diazotrophic rice-field	2101011		
	cyanobacterium <i>Anabaena oryzae</i> 22/ 927-			
	935			
34	Singh SK and Tiwari DN/ Control of alkaline	J Plant Physiol	2000	2.791
	phospahtase activity in Anabaena oryzae			
	Fritsch. 157/ 467-472	G . 11	100=	
35	Fritsch. 157/ 467-472 Shukla SP, <b>Singh SK,</b> Mishra AK/ Energetics	Cytobios	1997	Peer Reviewed
35	Fritsch. 157/ 467-472  Shukla SP, <b>Singh SK</b> , Mishra AK/ Energetics of alkaline phosphatase (monoesterase)	Cytobios	1997	Peer Reviewed
35	Fritsch. 157/ 467-472 Shukla SP, <b>Singh SK,</b> Mishra AK/ Energetics	Cytobios	1997	Peer Reviewed

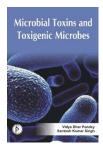
National Publications annexure-ii

S.I.	Authors/Title/Vol./Page No.	Journal/Book	Year	Impact Factor/ Peer Reviewed
1	Singh AK, Singh SK, Kamboj P/ Isolation and Characterization of antifungal lectin from seeds of Cassia auriculata Linn.,	Indian Journal of Agriculture and Allied Sciences	2017	Peer Reviewed
2	Gupta J, Jain V, <b>Singh SK</b> , Gupta N and Jain P/Study of Intralesional Triamcinolone Alone and in Combination with Pressure Garments for the Treatment of Hypertrophic Scars and Correlation of Outcome with Expression of Transforming Growth Factor Beta	International Journal of Innovative Research in Science, Engineering and Technology	2017	Peer Reviewed
3	Gupta R, Gupta GD, <b>Singh SK</b> and Singh Lakshman/Anti Lithogenic Effect of Rohitakadhya extract and Phaltrikadi decoction on Swiss Albino Mice.	International Journal of Current Research	2017	Peer Reviewed
4	Yadav MK, <b>Singh SK</b> and Tripathi JS and Tripathi YB/ Ethnopharmacological activities of traditional Medicinal plant: <i>Evolvulus alsinoides</i>	World Journal Of Pharmacy And Pharmaceutical Sciences	2016	Peer Reviewed
5	Singh RK, Singh AK, Atri N and Singh SK/ Traditionally used Medicinal Plants as Alternative Source for Future Anticancer Drugs	The International Journal of Science & Technoledge	2015	Peer Reviewed
6	Srivastava P, Srivastava G, Singh BD&Singh SK/ Comparative Evaluation of Anticancer Activity of Crude Extracts and Isolated Compound Salicin of Desmodium gangeticum (L) DC Against Ehrlich Ascites Carcinoma in Swiss Albino Mice	World Journal of Pharmaceutical Research	2015	Peer Reviewed
7	Yadav MK, <b>Singh SK</b> and Tripathi JS/ Ethanopharmacological activity of <i>Clitoria</i> <i>ternatea</i> with special reference to Neuroprotective and Antidiabetic effect	Asian Journal Of Complementary and Alternative Medicine	2015	Peer Reviewed
8	Yadav MK, <b>Singh SK</b> and Tripathi JS/ An overview of Neuropharmacological activities of <i>Centella asiatica</i>	Medha-International J Multidis Res.	2015	Peer Review
9	Gupta S, Gupta S J, <b>Singh S K</b> / Role of <i>palash</i> (butea monosperma) <i>kshara</i> in the management of <i>dusta vrana</i> (chronic ulcers) with special reference to infected wound/2(3): 86-93	Int. J. Ayur. Pharma Research	2014	Peer Reviewed
10	Ranjan A, Tripathi JS, <b>Singh SK</b> , Singh RK Biodiversity of endophytic fungi of <i>Gymnema sylvestre</i> . (isbn 978-81-926935-3-8); 180-186	Mahima Reserch Foundation and Welfare	2014	Peer Reviewed

11	<b>Singh SK</b> /A study on the effect of leaf extract of <i>Moringa oleifera</i> on the ethanol induced stress in albino rats/ 4/7-10	Medha-International J Multidis Res.	2013	Peer Reviewed
12	<b>Singh SK</b> /Antibacterial activity of different extract of <i>Moringa oleifera</i> leaf against some pathogenic bacteria 2/13-15	Journal of Pharmaceutical and Scientific Innovation (JPSI).	2013	Peer Reviewed
13	<b>Singh SK</b> / Endophytic fungi from <i>Jatropha curcus</i> : A preliminary study 2/32-35	Journal of Pharmaceutical and Scientific Innovation (JPSI).	2013	Peer Reviewed
14	<b>Singh SK</b> / <i>Aegle marmelos</i> protects hepatocytes from paracetamol induced hepatotoxicity 4/53-56	Indian Journal of Scientific Research	2013	Peer Reviewed
15	<b>Singh SK</b> / Evaluation of <i>Moringa oleifera</i> seed extracts for antibacterial activity against some pathogenic bacterial strain 5/71-76	The Indian Research journal of Genetics and Biotechnology	2013	Peer Reviewed
16	Dwivedi M, Singh AK, Singh VP, Mishra PK and <b>Singh SK</b> / Studies on different concentration of Lead (Pb) and Cadmium (Cd) on growth and accumulation in different parts of Tulsi ( <i>Oscimum stennuiflorum</i> L.) 2/1733-1741	International Journal of Environmental Sciences	2012	Peer Reviewed
17	Dwivedi M, Singh AK, Singh VP and <b>Singh SK</b> / Effect of hexa valent chromium (VI) on <i>Oscimum stennuiflorum</i> L. 85/31-38	The Indian Journal of Bio Research.	2011	Peer Reviewed
18	Pandey VD and <b>Singh SK</b> /Antibacterial activity of silver nanoparticles against human pathogenic bacteria. 9(2) 69-76.	Science and Society	2011	Peer Reviewed
19	Singh SK, Verma VC and Pandey VD/ Nanoparticles: From biofabrication to biomedical application 9(2)/51-68	Science and Society	2011	Peer Reviewed
20	Pandey VD and <b>Singh SK</b> / Antibacterial activity of fresh water cyanobacteria 9/477-480	Plant Archives	2009	Peer Reviewed
21	<b>Singh SK</b> and Pandey VD/ Evaluation of <i>Hyoscyamus niger</i> L. extracts for antibacterial activity 9/ 97-100	Plant Archives	2009	Peer Reviewed
22	Singh A, Sujatha N, <b>Singh SK</b> , Rai NP/ Hepatoprotective activity of Picrorrhiza kurroa and <i>Andrographis paniculata</i> against paracetamol intoxication in albino rats 75/108-117	Indian J Bio-Research	2009	Peer Reviewed
23	Singh OP, Sujatha N, Rai PK, Rai NP and Singh SK/ Studies on hepato-protective action of <i>Terminalia chebula</i> , <i>Terminalia bellerica</i> and <i>Emblica officinalis</i> (Triphala) pp.328-335	In De Silva (Eds.) Traditional and Alternative Medicine, Daya Publishing House, Delhi, India.	2009	Peer Reviewed
24	Rai PK, Singh OP, Rai NP and Singh SK /	Aryavaidyan,	2008	Peer

	Efficacy of vamana in the management of kitibha (Psoriasis). India.1/39-42.			Reviewed
25	Rai PK, Singh OP, Rai NP and <b>Singh SK</b> /Management of kitibha (Psoriasis) by some Indian drugs. 29/234-237	AYU, India.	2008	Peer Reviewed
26	<b>Singh SK,</b> Rai PK, Singh OP and Rai NP/ Effect of <i>Tinospora cordifolia</i> on ethanol induced oxidative stress in albino rats. 2/ 29-32	J Clin Ped	2008	Peer Reviewed
27	Pandey VD, Gupta RK and <b>Singh SK</b> / Cyanobacteria as a source of pharmaceutical compounds pp.250-260	In Gupta RK (Eds.) Glimpses of cyanobacteria, Daya Publishing House, Delhi, India.	2007	Peer Reviewed
28	Pandey VD, Gupta RK, Gupta RC, Mishra AK and <b>Singh SK</b> / Cyanobacteria as a source of antimicrobial compounds pp.78-86.	In Gupta RK (Eds.) Glimpses of cyanobacteria, Daya Publishing House, Delhi, India.	2006	Peer Reviewed
29	Mishra AK, <b>Singh SK</b> , Singh SS and Pandey VD/ Regulation of heterocyst and nitrogen metabolism pp.26-47	In Gupta RK (Eds.) Glimpses of cyanobacteria, Daya Publishing House, Delhi, India.	2006	Peer Reviewed
30	Tiwari DN, <b>Singh SK</b> and Pandey M/Alkaline phosphatase activity in cyanobacteria pp.345-350.	In Anand N (Eds.) Algological Research in India. Bisen Singh Mahendra Pal Singh, Dehradoon, India.	2002	Peer Reviewed
31	Singh AL and <b>Singh SK</b> / Palladium detoxification and its localization in bluegreen alga <i>Nostoc muscorum</i> .  Environmental Geochemistry3/ 7-9	J Assoc Environ Geochem	1999	Peer Reviewed
32	Singh AL, <b>Singh SK</b> and Rajkumar B 1999. Removal of Cu by Pseudomonas aeruginosa from polluted water of Barakar river, Dhanbad, Bihar, India. Environmental Geochemistry2/7-10.	J Assoc Environ Geochem	1999	Peer Reviewed
33	Singh AL and <b>Singh SK</b> / Importance of agroforestry in himalyan region 5/79-81	Asmika. vadiya himalaya geological institute. Dehradoon, India	1999	Peer Reviewed
34	Singh AL and <b>Singh SK</b> / Removal of nickel toxicity by <i>Nostoc muscorum</i> (Cyanobacterium): An experimental study. Vigyan garima sindhu. 26/104-109	Ministry of Human Resource & Development, Govt. of India.	1998	Peer Reviewed

BOOKS ANNEXURE-III



1. **Microbial toxin and toxigenic microbes-** (Eds. Vidya Dhar Pandey and **Santosh Kumar Singh).**Studium Press (LLC) Ltd., Houston Texas **USA**, **2012. ISBN:** 1-933699-73-6