BIODATA OF SCIENTIST

Shashi Singh, Ph.D.

Chief Scientist (Retd. Chief Scientist, CSIR-CCMB)
Currently Professor and Dean @ DY Patil International University Pune.
Phone : +91 9866098626

Citizenship: Indian
Date of Birth: Aug 20th 1960 in Jabalpur, MP, INDIA
Designation: Chief Scientist
Language Skills: English, Hindi (native speaker), Punjabi, German (basic knowledge)

Area of specialization Cell biology (Stem Cells) / Electron Microscopy
a. Reconstruction of cornea
b. Islet regeneration or artificial pancreas
c. Bone tissue engineering and IVD restructuring
d. iPSC generation and organoid formation
e. Nano-toxicology

Professional Experience

Junior Research Officer (Aug1987-Aug1988)	National Institute of Immunology, N Delhi
Lecturer (Oct 1988-Nov1988)	Dept Bio Sci. and Biotech, Univ Roorkee, Roorkee
Scientist Dec 1988-Aug 2020 (From Scientist B to Chief Scientist)	CCMB, CSIR Hyderabad INDIA
Professor Biosciences &Bioengineering (March 2021-contd)	DY Patil International University Pune, INDIA

Membership of professional societies/ institutions

1. Life Member of Society of Cell Biology
2. Life Member of Society of Reproductive Biology and Comparative Endocrinology
3. Ordinary member of Society of Biochemist of India
4. Life member of Electron Microscope Society of India

Publications

Stem cells, Tissue engineering and Nanotechnology

1. S Sandilya, S Singh Development of islet organoids from human induced pluripotent stem cells in a cross-linked collagen scaffold Cell Regeneration 10 (1), 38 **[2.66]** **{citations 1}**
2. Uday Chandrika K, Sapna Kacha, Anuja S Nair, Vijayishwer S Jamwal, Shruti Sandilya, **Shashi Singh(2021)** Tissue Engineering of Cartilage using glycan rich collagen Scaffold. Cartilage 1–13; DOI 10.1177/19476035211007899**[3.85]** **{citations 4}**
3. Nipun Jain, **Shashi Singh (2021)** Role of Glycans in Scaffold Design in Tissue Reconstruction. Journal of Bioactive and Compatible Polymers https://doi.org/10.1177/0883911521997847 **[1.624]** **{citations 2}**
4. Rohit Rekulapally, Udayachandrika K, Sirisha Hamlipur, Anuja Sasidharan, Biswajit Pal, **Shashi Singh** (2021) Tissue Engineering using Collagen Scaffolds Crosslinked with Plant Based polysaccharides" Progress in Biomaterials 10:29-41. **10.1007/s40204-021-00149-4** **[5.0]** **{citations 10}**
5. Vijayishwar S Jamal[#], Vishnu Vijay V[#], Anushka Reddy, Yash Parekh, Bokara KK, Chandrasekhar P, **Shashi Singh*** (2020) A human iPSC cell line generated from skin fibroblast obtained from an abortus. lab resources - **Stem Cell Research** doi.org/10.1016/j.scr.2020.101963 **[4.489]** **{citations 3}**
6. K Uday Chandrika, Rekha Tripathi, Kameshwari Y, Nandini Rangaraj, Mahesh Kumar J, **Shashi Singh*** (2020) Refunctionalization of decellularized Organ Scaffold of Pancreas by Recellularization. **Tissue Engineering and Regenerative Medicine** DOI 10.1007/s13770-020-00296-y **[2.347]** **{citations 13}**
7. Snehal Raut and **Shashi Singh*** (2016) Calcium-phosphate nanobioceramics. **Letters in Applied NanoBioScience** 5: 389-396**[]** **{citations 2}**
8. SSB Komakula, Snehal Raut, NP Varma, TA Raj, MJ Kumar, A Sinha, **Shashi Singh*** (2015) Assessment of injectable and cohesive nanohydroxyapatite composites for biological functions. **Progress in Biomaterials** 4:31-38 DOI: 10.1007/s40204-014-0034-7 **[5.0]** **{citations 5}**
9. *S. Mondal, A. Mondal, N. Mandal, B. Mondal, S. S. Mukhopadhyay, A. Dey & **S. Singh** 2013 Physico-chemical characterization and biological response of Labeo rohita-derived hydroxyapatite scaffold. **Bioprocess and Biosystems Engineering.** DOI 10.1007/s00449-013-1095-z **[2.139]** **{citations 27}**
10. S Reddy, S Wasnik, A Guha, JM Kumar, A Sinha, **S Singh*** (2013) Evaluation of nano-biphasic calcium phosphate ceramics for bone tissue engineering applications: In vitro and preliminary in vivo studies **Journal of Biomaterials Applications**; 27(5):565-75. doi: 10.1177/0885328211415132. **[2.224]** **{citations 65}**

11. Thejaswi Kalagara, Amarnath Miriyala, Srinivas G, Mahesh Kumar Jerald, T Avinash Raj, **Shashi Singh** (2012) Immune modulatory responses of Mesenchymal stem cells from different sources in cultures and *in vivo*. ***Cell & Tissue Transplantation & Therapy*** **4** :1–13**[awaited] {citations 19}**
12. S Reddy, M Amarnath, A Sinha, S Singh (2011) NanoBiphasic Ceramics for Tissue Engineering: A Review. Journal of Bionanoscience 5 (1), 26-32**[4.483] {citations 11}**
13. Avijit kumar Guha, **Shashi Singh**, R Kumaresan, Suprabha Nayar and Arvind Sinha (2009) Mesenchymal cell response to nanosized biphasic calcium phosphate composites. **Colloids and Surfaces B: Biointerfaces 73** :146–151 **[4.389] {citations 74}**
14. VS Sangwan, HP Matalia, GK Vemuganti, G Iftekar, A Fatima, **S Singh (2005)** Ex vivo Cultivated Limbal Epithelium Transplantation: Results of First 100 Cases.. Investigative Ophthalmology & Visual Science 46 (13), 4972-4972**{citations 11}**
15. Sangwan VS, Matalia HP, Vemuganti GK, Ifthekar G, Fatima A, **Singh S**, Rao GN. (2005) Early results of penetrating keratoplasty after cultivated limbal epithelium transplantation. **Arch Ophthalmol.;** 123: 334-40**.[4.013] {citations 187}**
16. Vemuganti GK, Kashyap S, Sangwan VS, **Singh S**. (2004**)** Ex-vivo potential of cadaveric and fresh limbal tissues to regenerate cultured epithelium. **Indian J Ophthalmol 52:**113-20. **{citations 48}**
17. Sangwan VS, Matalia HP, Vemuganti GK, Fatima A, Ifthekar G, **Singh S**, Nutheti R, Rao GN. (2006) Clinical outcome of autologous cultivated limbal epithelium transplantation. **Indian J Ophthalmol 54**:29-34 **.[0.93] {citations 172}**
18. Sangwan VS, G K Vemuganti, **Shashi Singh,** D.Balasubramanian (2003) Successful Reconstruction of damaged ocular outer surface in humans using limbal and conjunctival stem cell culture methods. **Biosciences report** 23:169-174 [**2.742] {citations 117}**
19. MC Habibullah, VV Venkateshan, BN Shakeel, AM Habeeb, SS Singh, MN Rao (2000) Hepatofunctional study of ultraviolet-B (302 nm) irradiated goat hepatocytes :The American Journal of Gastroenterology 95 (9), 2511[**10.71] {citations 3}**

Nanotoxicity

20. Rekulapally R, Murthy Chavali LN, Idris MM, **Singh S**. (2019) Toxicity of TiO2, SiO2, ZnO, CuO, Au and Ag engineered nanoparticles on hatching and early nauplii of Artemia sp. **PeerJ** 6:e6138 DOI 10.7717/peerj.6138**[3.09] {citations 11}**
21. G Begum, T N Reddy, K. P Kumar, K Dhevendar, **Shashi Singh**, M Amarnath, S Misra, V K. Rangari, and Rohit K Rana (2016) An in situ Strategy to Encapsulate Antibiotics in a Bio-inspired CaCO3 Structure Enabling pH-Sensitive Drug

Release Apt for Therapeutic and Imaging ***ACS Appl. Mater. Interfaces*****, 8** (34), pp 22056–22063 **DOI:** 10.1021/acsami.6b07177**[8.758] {citations 26}**

22. *Bondarenko OM, Heinlaan M, Sihtmäe M, Ivask A, Kurvet I, Joonas E, Jemec A, Mannerström M, Heinonen T, Rekulapelly R, **Singh S**, Zou J, Pyykkö I, Drobne D, Kahru A. Multilaboratory (2016)evaluation of 15 bioassays for (eco)toxicity screening and hazard ranking of engineered nanomaterials: FP7 project NANOVALID. **Nanotoxicology** 10(9):1229-42 10.1080/17435390.2016.1196251 Epub 2016 Jun 28. **[7.913] {citations 92}**
23. *M Kos, A Kahru, D Drobne, **Shashi Singh**, G Kalčíková, D Kühnel, Rekulapelly Rohit, AŽ Gotvajn, A Jemec, A case study to optimise and validate the brine shrimp *Artemia franciscana* immobilisation assay with silver nanoparticles: The role of harmonization. **Envir. Pollution** 213: *173-183***[6.792] {citations 35}**
24. *A Jemec , A Kahru, A Potthof, D] Drobne, M Heinlaan, S Böhme, M Geppert, S Novak, K Schirmer, R Rekulapally, **Shashi Singh**, V Aruoja, M Sihtmäe, K Juganson A Käkinen, D Kühnel. 2016, An interlaboratory comparison of nanosilver characterisation and hazard identification: Harmonising techniques for high quality data. **Environment International** 87: 20–32 **[7.943] {citations 43}**
25. *Ritesh K . Shukla, Ashutosh Kumar, Deepak Gurbani, Alok K. Pandey, **Shashi Singh**, and Alok Dhawan (2013) TiO_2 nanoparticles induce oxidative DNA damage and apoptosis in human liver cells. **Nanotoxicology**,7:48-60 (doi: 10.3109/17435390.2011.629747) **[6.3] {citations 269}**
26. Ashutosh Kumar, Alok K. Pandey, **Shashi Singh**, Rishi Shanker and Alok Dhawan (2011) A flow cytometric method to assess nanoparticle uptake in bacteria. **Cytometry a 79A**: 707–712 **[3.69] {citations 113}**
27. Ashutosh Kumar, Alok K. Pandey, **Shashi Singh**, Rishi Shanker and Alok Dhawan (2011) Cellular uptake and mutagenic potential of metal oxide nanoparticles in bacterial cells. **Chemosphere 83** :1124-1132 **[5.778] {citations 277}**
28. Shukla RK, Sharma V, Pandey AK, Singh S, Sarwat S, Dhawan A. (2011) ROS-mediated genotoxicity induced by titanium dioxide nanoparticles in human epidermal cells. **Toxicology in Vitro 25**:231-241**[3.17] {citations 561}**
29. Ashutosh Kumar, Alok K. Pandey, **Shashi Singh**, Rishi Shanker and Alok Dhawan (2011) Engineered ZnO and TiO2 nanoparticles induce oxidative stress and DNA damage leading to reduced viability of *Escherichia coli.* **Free Radical Biology & Medicine 51**:1872–1881 **[6.17] {citations 454}**
30. A Kumar, AK Pandey, SS Singh, R Shanker, A Dhawan (2011) Cellular response to metal oxide nanoparticles in bacteria. Journal of biomedical nanotechnology 7 (1), 102-103**[4.483] {citations 24}**
31. Shukla RK, A Kumar, AK Pandey, SS Singh, A Dhawan (2011) Titanium dioxide nanoparticles induce oxidative stress-mediated apoptosis in human keratinocyte cells Journal of biomedical nanotechnology 7 (1), 100-101**[4.483] {citations 113}**
32. *Debanjan Guin, Sunkara V Manorama, J Naveen Lavanya Latha and **Shashi Singh** (2007) Photoreduction of Silver on bare & colloidal TiO_2 nanoparticles/ nanotubes: Synthesis, Characterization and tested for Antibacterial outcome**.** ***J. Phys. Chem. C***, ***111***, 13393-13397 **[4.189] {citations171}**

Ultrastructure

33. *Manjeet Deshmukh, **Shashi Singh**, Armin Geyer (2013) Synthetic Adhesive Oligopeptides with Rigid Polyhydroxylated Amino Acids. **Biopolymers** 99:273–281. **[2.87] {citations 2}**
34. *Prudhvi Raj, Karthikeyan Vasudevan, Deepak V, Richa Sharma, Shashi Singh, Ramesh K. Aggarwal And Sushil K. Dutta (2012) Larval morphology and ontogeny of *Nasikabatrachus sahyadrensis* Biju & Bossuyt, 2003 (Anura, Nasikabatrachidae) from Western Ghats, India. **Zootaxa** 3510: *1*–40 **[0.927] {citations 10}**
35. Anil Kumar, P., Srinivas, T. N. R., Madhu, S., Sravan Kumar, R. **Shashi Singh.,** Naqvi, SWA., Mayilraj, S. and Shivaji, S. (2012). *Cecembia lonarensis* gen. nov., sp. nov., a novel haloalkalitolerant bacterium of the family *Cyclobacteriaceae*, isolated from a haloalkaline lake and emended description of the genera *Indibacter*, *Nitritalea*, *Belliella* and *Aquiflexum*. **Int. J. Syst. Evol. Microbiol.** 62:2252-2258 [**2.4] {citations 25}**
36. AJ Amali, S Singh, N Rangaraj, D Patra, RK Rana (2012) Poly (L-Lysine)–pyranine-3 coacervate mediated nanoparticle-assembly: fabrication of dynamic pH-responsive containers. **Chemical Communications 48**:856-858. **[5.341] {citations 18}**
37. S. Shivaji S. Madhu, **Shashi Singh** (2011) Extracellular synthesis of antibacterial silver nanoparticles using psychrophilic bacteria. **Process Biochemistry 46**:1800-1807 **[2.952] {citations 339}**
38. Chaturvedi V, Kumat JU, Swamy CVB, n Rangaraj, Srinivas G, Kumaresan K, **Singh Shashi**, Sreedhar AS (2011) Repercussions of Mitochondria deformity Induced by anti-HSP90 Drug 17 AAG Human tumor cells. **Drug Target Insights 2011**:5 11–32 **[awaited] {citations 3}**
39. Periyasamy Govindaraj, Nahid Akhtar Khan, Praturi Gopalakrishna, Rampalli Viswa Chandra, Ayyasamy Vanniarajan, Aileni Amarendra Reddy, **Shashi Singh,** Rathinam Kumaresan, Gunda Srinivas Lalji Singh, Kumarasamy Thangaraj (2011) Mitochondrial dysfunction and genetic heterogeneity in chronic periodontitis. **Mitochondrion 11**: (3) 504-512 **[3.43] {citations 43}**
40. N Chaudhary, S Singh, R Nagaraj (2011) Aggregation properties of a short peptide that mediates amyloid fibril formation in model proteins unrelated to disease. **Journal of biosciences 36**: 679-689 **[1.831] {citations 8}**
41. Gousia Begum, Shashi Singh, Nandini Rangaraj, G. Srinivas and Rohit K. Rana (2010) Cellular permeation with nuclear infiltration capability of biomimetically synthesised fluorescent monodisperse mesoporous silica nanospheres in HeLa and human stem cells. **J Mater Chem. 20**, 8563-8570 **[11.3] {citations 11}**
42. *Begum, Gousia; Rana, Rohit; Singh, Shashi; Satyanarayana, L.(2010) "Bio-inspired Silicification of Functional Materials: Fluorescent Monodisperse Mesostructure Silica Nanospheres **Chem. Mater.2**:551–556**[9.567] {citations 36}**
43. N Chaudhary, S Singh, R Nagaraj (2009) Morphology of self-assembled structures formed by short peptides from the amyloidogenic protein tau depends

on the solvent in which the peptides are dissolved. **Journal of Peptide Science** 15: 675-684 **[2.02] {citations 29}**

44. *Basu D; Khare G; **Singh Shashi**; Tyagi, A; Khosla S; Mande Shekhar (2009) A novel nucleoid associated protein of M. tuberculosis is a sequence homolog of GroEL, **NAR 37:**4944-54 **(11.502) {citations 42}**
45. Jennifer Xavier, **Shashi Singh**, David A Dean, N. Madhusudhana Rao, Vijaya Gopal ((2009) Designed multi-domain protein as a carrier of nucleic acids into cells. **Journal of Controlled Release 133**:154–160 **[7.633] {citations 42}**
46. Nitin Chaudhary, **Shashi Singh**, Ramakrishnan Nagaraj **(2008) Organic solvent mediated self-association of an amyloid forming peptide from beta2-micro-globulin: An atomic force microscopy study. Peptide Science 90**:783-91**[1.877] {citations 27}**
47. *Goussia Begum; SV Manorama, **Shashi Singh,** Rohit K Rana (2008) Morphology controlled assembly of ZnO nanostructures: A bioinspired method and visible luminescence. **Chemistry European Journal** 14:6421-6427 **[4.857 {citations 30}**
48. *SS, Selim; Nag, M; **Kalagara Thejaswi; Singh Shashi;** Sunkara V, Manorama (2008) Silver on PEG-PU-TiO_2 Polymer Nanocomposite Films: An Excellent System for Antibacterial Applications. **Chem Mater**. **20**: 2455-2460. **[9.567] {citations 200}**
49. M.J.Mahesh Kumar, K.S.Ponvijay, R. Nandhini, R.S. Nagarajan, J. Jose, G. Srinivas P. Nagarajan, R. Venkatesan, Kishor Kumar and **S. Singh** (2007**)** A mouse model for Luminal epithelial like ER positive subtype of human breast cancer. **BMC cancer**, **7**:180 **[1.186] {citations 12}**
50. Jobin Varkey, **Shashi Singh** and Ramakrishnan Nagaraj (2006**)** Antibacterial activity of linear peptides spanning the carboxy-terminal β-sheet domain of arthropod defensins **Peptides 27**:2614-2623 **[2.68] {citations 24}**
51. V Krishna Kumari; **Shashi Singh** and R Nagaraj (2006) Antibacterial activities of synthetic peptides corresponding to the carboxy terminal region of human defensin 1-3" **Peptides 27**:2607-2613 **[2.68] {citations 75}**
52. *K Arun Kumar; **Shashi Singh** and P Prakash Babu (2006) Studies on the glycoprotein modification in Erythrocyte membrane during experimental cerebral malaria. **Experimental Parasitol**.**114**:173-179 **[1.597] {citations 3}**
53. P. Chandra Shekar, Sandeep Goel, S. Deepa Selvi Rani, D. Partha Sarathi, Jomini Liza Alex, **Shashi Singh** and Satish Kumar (2006) κ_-Casein-deficient mice fail to lactate **Proc. Nat Sci Acad USA 103:**8000-8005 **[9.43] {citations 64}**
54. Tushar K. Vyas, Babbar AK, Sharma RK, **Shashi Singh** and AN Misra (2006) Intranasal Mucoadhesive Microemulsions of Clonazepam: Preliminary Studies on Brain Targeting. **Journal of Pharmaceutical Sciences 95:** E1-E11 **[2.997] {citations 225}**
55. *Majji AB, Vemuganti GK, Shah VA, **Singh S**, Das T, Jalali S. A comparative study of epiretinal membranes associated with Eales' disease: A clinicopathologic evaluation. ***Eye*** *2006; 20 (1): 46-54* **[1.87] {citations 15}**
56. *Vyas TK, Babbar AK, Sharma RK, **Singh S**, Misra A. (2006) Preliminary Brain-targeting Studies on Intranasal Mucoadhesive Micro-emulsions Sumatriptan. **AAPS PharmSciTech. 6** :E1-E9 **[2.401] {citations 139}**

57. *Khan, M ; Shobha JC, Mohan IK, Naidu MUR, Sundaram C, **Shashi Singh** , Kuppusamy P , Kutala VK (2005) Protective effect of *Spirulina* against doxorubicin-induced cardiotoxicity. **Phytothrapy Res**. **19**:1030-37 **[3.8] {citations 193}**
58. Geeta K Vemuganti, Prashant Garg , Savitri Sharma, Joveeta Joseph Usha Gopinathan, **Shashi Singh** (2005) Is microsporidial keratitis an emerging cause of stromal keratitis? - a case series study ***BMC Ophthalmology*** **5:**19 **[1.4] {citations 69}**
59. Ritu Khurana, Chris Coleman, Cristian Ionescu-Zanetti, Sue A. Carter, Vinay Krishna, Rajesh K. Grover, Raja Roy, **Shashi Singh** (2005) Mechanism of thioflavin T binding to amyloid fibrils**. J Structural Biology 151:** 229–238 **[3.07] {citations 954}**
60. Shatabdi Porel, **Shashi Singh**, S. Sree Harsha, D. Narayana Rao, and T. P. Radhakrishnan, (2005) Nanoparticle-Embedded Polymer: In Situ Synthesis, Free-Standing Films with Highly Monodisperse Silver Nanoparticles and Optical Limiting **Chem Mater.17, 9-12 [9.567] {citations 374}**
61. S. Porel, S. Singh and T. P. Radhakrishnan (2005) Polygonal gold nanoplates in a polymer matrix **Chem Comm** :2387-2389 **[5.996] {citations 128}**
62. P. Kavin Kennady, M. G. Ormerod**, Shashi Singh**, Gopal Pande **(2004)** Variation of mitochondrial size during the cell cycle: A multiparameter flow cytometric and microscopic study **Cytometry** 62A:97-10**8 [3.69] {citations 32}**
63. Viswanatha Krishnakumari, Ambure Sharada devi, Shashi Singh, and Ramakrishnan Nagaraj (2003) Single Disulfide and Linear Analogues Corresponding to the Carboxy-Terminal Segment of Bovine **β**-Defensin-2: Effects of Introducing the **β**-Hairpin Nucleating Sequence D-Pro-Gly on Antibacterial Activity and Biophysical Properties. **Biochemistry** 42: 9307 – 9315 [2.952**] {citations 54}**
64. Ananya Bera, Shashi Singh, Ramakrishna Nagaraj and Tushar Vaidya (2003) Induction of autophagic cell death in *Leishmania donovani* by antimicrobial peptides. **Molecular and Biochemical Parasitology** 127:23-35 **[1.571 {citations 159}**
65. Naidu MUR, Vijay kumar K, KrishnaMohan I, Sundaram C and **Shashi Singh** (2002) Protective effects of *Gingko biloba* against doxorubucin-induced cardiotoxicity in mice. **Ind J Exp. Biol**. 40: 894-900.9 **[0.782] {citations 68}**
66. Geeta KV; Sridhar MS; Edward DP and **Shashi Singh** (2002) Subepithelial amyloid deposits in Congenital Hereditary endothelial dystrophies- a histopathological study of 5 cases. **Cornea**.21:524-529 **[2.215] {citations 12}**
67. Sitaram, N; PurnaSai, K; Shashi Singh;_Sankaran K; Nagaraj R (2002) Structure-Function Relationship on the Frog Skin Anti-microbial Peptide Tigerenin 1: Design of analogs with improved activity and their action on Clinical Bacterial Isolates. **Antimicrobial Agents and Chemotherapy** 46: 2279-83**[4.715] {citations 50}**
68. Batra A, Geeta K V; T P Das; **Shashi Singh** and Jalali S (2001) Does Silicon oil peneterate lens capsules. **Retina the Journal of Retinal and Vitreous diseases** 21:275-277 **[3.649] {citations 15}**

Others

69. Saisantosh Babu Komakulla, Ashok Kumar Tewari, **Shashi Singh**. Quantitative analysis of GLUT4 translocation using HCS. Biomed and Pharmcoth. https://doi.org/10.1016/j.biopha.2020.111032 **[4.54] {citations }**
70. Susinjan Bhattacharya, Naveena Lavanya Latha. J, R. Kumresan and Shashi Singh (2007) "Cloning And Expression Of Human Islet Amyloid Polypeptide In Cultured Cells. **Biochemical and Biophysical Research Communications 356** :622–628 **[2.985] {citations 7}**
71. **Shashi Singh**, Philip W Shaul and PD Gupta (2002) Conventional type of Estrogen receptor α is found in the plasma membrane of vaginal epithelial cells of Rat. **Steroids** 67:757-764**[1.948] {citations 15}**
72. **Shashi Singh** and Gupta PD (1999) Deregulation of intermediate filament protein phosphorylation leads to pathogenesis: a review. **Biomed. Letters** 59:27-32 **{citations 5}**
73. **Shashi singh** and Gupta PD (1997) Induction of Phospho inositide mediated signal transduction pathway by 17β estradiol in rat vaginal epithelial cells. **J Mol. Endocrinol.** 19: 249-257 **[3.562] {citations 29}**
74. *Jagota, A **Singh.S**, Yasuzumi, F and Gupta PD (1995) Morphological and Biochemical studies on Intracellular crystals : a review **Cytobios 82; 101-122 [0.333]**
75. **Shashi Singh** and Gupta PD (1994) Tampering with cytokeratin expression leads to cell dysfunction**. Epithelial Cell Biol 3:79-83 {citations 11}**
76. **Shashi Singh** and Gupta PD (1994) Intermediate filaments- Heterogenous expression pattern and Modulations: Can their role in structure and function be ascertained. **Biol. Cell 82:1-10 [3.922] {citations 8}**
77. **Shashi Singh**; Koke JR; Gupta PD and Malhotra SK (1994) Multiple roles of Intermediate filaments. **Cytobios 77: 41-57 [0.333]**
78. Gupta PD, **Relia, SB**; Bapurao S and Reddy AG (1990) Keratinization of rat vaginal epithelium V Modulations of intracellular calcium by estradiol. **J Steroid Biochem. Mol. Biol**.37:521-527 **[2.827]**
79. √ **Shashi B Relia**, Kaul, N; and Sapra GR 1987: Mineral concretions in *Stylonychia mytilus* Ehrenberg (Cliliata: Protozoa) Ehrenberg. **Ind J Expt. Biol**. 26:407-412 **[0.551].**

Chapters in Books

1. Surabhi Sonam, Sanjay Kumar and Shashi Singh (2023) One-dimensional Polymeric Nanocomposites for Tissue Engineering in"One Dimensional Polymeric Nanocomposites: Synthesis to Emerging Applications" CRC press
2. **Shashi Singh** (2018) Understanding the interaction of nanomaterials with living systems: Tissue engineering" in CRC Press/Taylor and Francis Group. Nanobiotechnology: Human Health and the Environment

3. Manorama SV, Basak P and **Shashi Singh**; 'Anti-Microbial Properties of Polymer Nanocomposites' for publication in the book: "Nanocomposite Particles for Bio-Applications: Materials and Bio-Interfaces", edited by Tito Trindade and Ana Luisa Daniel da Silva (University of Aveiro, Portugal), Pan Stanford Publishing. (In Press, Scheduled Summer-2010)
4. **Shashi Singh**; Reddy AG; Rao KS; Vijayalakshmi V; Kumaresan R; and Gupta PD (1999) Organization of keratin filaments following phosphorylation by estradiol in rat vaginal epithelial cells. In " Electron Microscopy in Medicine and Biology" Eds PD Gupta and Yamamoto. Oxford IBH Co. Pvt. Ltd N Delhi.
5. Gupta PD and **Singh Shashi** (1997) Apoptosis and Therapeutics. In Proc. Int. Seminar on Frontiers in Surgical Pathology. Univ Madras. Chennai.
6. **Shashi Singh** and Gupta PD (1996) Mechanism of action of Estradiol: Non-genomic events in " Cellular and Molecular signalling in Reproduction" Eds Sengupta and Ghosh. New Age International publishers N Delhi.
7. PD Gupta; **Relia SB**, Sudhakar Ch. And Reddy AG (1992) amplification of keratin gene expression under the influence of estradiol 17β in rat vaginal epithelial cells in "Frontiers in Reproductive Physiology" ed. Ghosh and Sengupta. Wiley Eastern Ltd. N Delhi

Books reviewed

1) **Shashi Singh** (2003) Gold and Silver Staining: Techniques in Molecular Morphology Ed Hacker and Gu. CRC press.2002. in Microscopy and Analysis January 2003 : Issue 31
2) Gupta PD and **Shashi Singh** (1998), Hormones and Cancer ed. WV Vedeckis, Birkhauser, Boston.
3) **Shashi Singh** (1997) Cellular and Molecular signaling in reproduction, New Age International Publishers, New Delhi ISBN81-224-1019-7in J Cytology &Genetics.32

Awards and Honours

1. KN Dastur Memorial Lecture In 52nd Annual Conference of Indian Association of Cardiovascular & Thoracic Surgeons from 23rd Feb 2006 to 26th Feb 2006 at Bangalore.
2. Outstanding Manuscript Award in AAPS PharmSciTech 2008. Shared with other coauthors of the paper-
   Vyas TK, Babbar AK, Sharma RK, Singh S, Misra A. (2006) Preliminary Brain-targeting Studies on Intranasal Mucoadhesive Micro-emulsions of Sumatriptan. AAPS PharmSciTech. 6 :E1- E9

Teaching Experience

Course coordinator and instructor for Skill development courses on (i) Stem cell Biology, (ii) Cell biology and (iii) Nanobiotechnology in 2018 and 2019

Instructor for orientation course for industry in cell biology

Instructor, Ph.D. orientation course on Techniques in Biology- Electron Microscopy till 2009

External examiner for Ph.D. - served as examiner for Ph.D. thesis for various Institutes and Universities
Lectures and invited talks at various symposia or institutes.

Course organizer for workshop on stem cell biology on Feb 25-March 10, 2008; at CCMB Hyderabad for ADNAT.

Workshop Instructor and Organizer at CCMB for Workshop on Microscopy in Biology

Workshop instructor at Winter School for Scanning Probe Microscopes at CSIO, Chandigarh in 1995

Research Funding

1. CSIR NCP- Tissue Engineering of cartilage and IVD for arthritic and disc degeneration problems. 2019-2020
2. CSIR network project MEDCHEM 2012-17
3. CSIR network project NAPAHA 2012-17
4. CSIR network project NANOSHE 2012-17
5. CSIR network project BIOCERAM 2012-17
6. CSIR network project BIOAG2012-17
7. ICMR project Decellularization of organs for tissue engineering 2012-15
8. FP7 project NANOVALID 2011-2015
9. Fabrication of structured nano-biomaterials webs and writings through biomimetism with emphasis on self-mineralizing architecture for tissue engineering (DBT**) 2007-2010**
10. CSIR network Project on Nanobiotechnology 2007-2012
11. Cell response to biomimetic scaffold synthesized under microgravity during SRE 1 flight and mechanosensation of cells on biomimetic scaffolds: a ground based study for a possible TE microgravity payload (ISRO). 2008-2010
12. Reconstruction of Cornea by cultured Cells (CSIR network program) 2003-2007
13. Pancreatic islets and beta cell cultures (CSIR network program) 2003-2007
14. Ex vivo expansion of corneal stem cells from limbal biopsies using human amniotic membrane as a substrate and its applications in treating ocular surface disorders caused by limbal stem cell deficiencies 2002-2005
15. Ultrastructural studies on Amyloid formation in Type II diabetes (Dept of Science and Technology) 2002-2005

Organizational activities

Helped in Organizing seminars in DYPIU

Senior most Faculty in CCMB since Dec. 2018- Aug 2020 - Administrative responsibility in absence of Director.

Expert for the inspection of GMP compliance for the facility of Cell manufacturing unit at AIG, Lifecell int. Pvt. Ltd, Global hospital, LV Prasad and KIMS

Expert for up-gradation of cGMP facility in CCMB

Chairperson of Purchase Committee of CCMB, of investment committee,

Member of Institutional committee of stem cell research for Asian Institute of Gastroenterology

Expert of Committee for establishment of Medical Device Park TSIIC Ltd

Expert for DSIR certification of Sun shine hospital, MSN laboratories pvt Ltd.

Editorial Board member for year 2017 – 2020 also Ex-Member of Editorial Board of JIGYASA (an in-house Hindi Magazine for popularization of Science) 1998- 2009

Ex Member Secretary of Institutional committee for stem cell research and therapy (2015-16) at CCMB

Ex-Member of Institutional Biosafety Committee at CCMB

Ex Member of Scientific committee for Global Hospital

Member of technical advisory committee for buying TEM in IITR Lucknow, TEM in CSMRI Bhavnagar, chairperson of technical committee for purchase of HCS in IIIM Jammu.

Member of Advisory committee of MHRT Hospital and Research Centre, Hyderabad

Head Electron Microscope and Atomic Force Facility (1999- 2010)

Member of organizing committee for Biology in EMSI meeting Kolkata 2013

Organizer for EM-50 Nanoscope Conference of EMSI India; Organization of Biology Chapter. Hyderbad July 2011

Member of Local organizing committee for the Annual meeting of Indian Biophysical Society being held in Jan 2009

Organizer for ADNAT symposium and workshop on Stem Cell Biology in February-March 2008

Member of National organizing committee on symposium on Ciliate biology held in Khalsa College, University of Delhi, New Delhi in Feb 2007

Organizer of 71 Anniversary INSA Meeting in Dec 2005 - Organized symposium on Stem Cell Research: Technological. Ethical and Social Issues

Organizer Indo-Japanese Symposium of frontiers in Biology and Annual Electron Microscopy Meeting of EMSI 1998

References available on request