

## CV Neha Garg

1. Name (**Dr./Kum./Smt./Shri**) First name(s) **Neha** Surname **Garg**
2. Designation: **Assistant Professor**
3. Complete Postal Address, Telephone Number, Fax, e-mail etc. Department of Medicinal Chemistry, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India  
Email: [nehagarg@bhu.ac.in](mailto:nehagarg@bhu.ac.in), [nehagarg.1986@gmail.com](mailto:nehagarg.1986@gmail.com)  
Google scholar:  
<https://scholar.google.ca/citations?hl=en&authorid=15053115063585285032&user=WjcSzQQAAAAJ>

Researchgate: [https://www.researchgate.net/profile/Neha\\_Garg2](https://www.researchgate.net/profile/Neha_Garg2)

4. Educational Qualification : Degrees obtained

Degree	Specialization	Institution	Year of joining	Year of leaving	%/ CGPA
Ph.D.	Molecular Medicine	Sapienza University of Rome, Rome, Italy	2009	2012 Final Viva 22nd Feb 2013	N/A
M.Sc.	Biochemistry	University of Delhi, South Campus, New Delhi, India	2006	2008	75%
B.Sc.	Biochemistry	University of Delhi, North Campus, New Delhi, India.	2003	2006	83.8%

### Courses covered:

**Ph.D. (2009-2012)** Molecular Medicine (October 2012), Final Viva-Voce-22<sup>nd</sup> February 2013  
Sapienza University of Rome, Department of Molecular Medicine, Rome, Italy.

Thesis Advisor: Prof. Elisabetta Ferretti and Late Prof. Alberto Gulino,

Thesis: Interplay of Nanog and microRNAs in controlling stemness and proliferation in Neural Stem Cells

**2006-2008:** Master of Science (M.Sc.) in Biochemistry from Department of Biochemistry, University of Delhi, South Campus, New Delhi, India [1st among the top twenty universities and Vth among top 100 research institutions by research performance in India selected by the National Institute of Science Communication and Information Resources (NISCAIR), Current Science, Vol. 96, No. 12, 25 June 2009], passed with 75% with the following subjects:

Part I: Advances in Proteins, Enzymes and Techniques in Biochemistry; Advance in Intermediary Metabolism; Cell Biology, Membrane Biology and Immunology; Introductory Microbiology; Term Papers and Seminar.

Part II: Molecular Biology; Recombinant DNA Technology; Developmental Biology; Microbial Genetics; Term Papers and Seminar.(Third Position in the University)

**2003-2006:** Bachelor of Science (B.Sc.) in Biochemistry from Daulat Ram College, University of Delhi, North Campus, New Delhi, India. Passed with First Class Honours having Distinction 83.8% marks. Subjects covered:

1st Year: Physical Chemistry; Inorganic and Organic Chemistry; Physics; Mathematics and Statistics; Introductory to Biology and Chemistry of Biologically important molecules; Practicals.

IIInd Year: Biochemical Biophysical Techniques; Proteins, Enzymes and Co-enzymes; Human Physiology and Endocrinology; Metabolism of Carbohydrates and Lipids; Metabolism of Amino acids, Nucleotides and Porphyrins; Practicals.

IIIrd Year: Molecular Biology; Gene Expression and Recombinant DNA Technology; Membrane Biochemistry and Bioenergetics; Cell Biology; Immunology; Practicals.(First position in North Campus, University of Delhi)

**2001-2003:** Intermediate (10+2) from Central Board of Secondary Education (CBSE), Delhi, India. Passed with 88% marks having Physics, Chemistry, Mathematics, Biology and English as major subjects.

**2001:** High school (10th) from Central Board of Secondary Education (CBSE), Delhi, India. Passed with 82% marks having Science, Mathematics, Social Science, English and Hindi as major subjects.

## 5. Research/Training Experience

No.	Position	Institution	Research field	From	To
1.	Assistant Professor	Faculty of Ayurveda, Banaras Hindu University	Cancer Biology, Nanotechnology and Stem cells	19 <sup>th</sup> Nov 2019	Present
2.	Ramanujan Faculty Fellow	Indian Institute of Technology Mandi, India	Cancer Biology, Nanotechnology and Stem cells	Aug 2016	17 <sup>th</sup> Nov 2019
3.	DST-INSPIRE faculty	Indian Institute of Technology Mandi, India	Cancer Biology, Nanotechnology and Stem cells	Nov 2015	July 2016
4.	Postdoctoral fellow	McMaster University, Hamilton, Canada	Cancer stem cells	Nov 2013	Oct 2015
5.	Postdoctoral fellow	Sapienza University of Rome, Rome, Italy	Molecular pathways in brain cancers	Aug 2013	Oct 2013
6.	Early career Researcher	Sapienza University of Rome, Rome, Italy	Molecular pathways in brain cancers	Nov 2012	July 2013

7. Research specialization (Major scientific fields of interest): Cancer biology, Stem cells, Drug delivery using Nano carriers, Toxicology, Computational drug discovery, Invivo Models development, Pharmacokinetics

### Technical expertise and skills:

Cell culture, Stem cell isolation and maintenance, patient derived cancer stem cell isolation, High throughput microRNA card analysis and statistical heatmap preparations, gene expression, Reverse transcription PCR, quantitative PCR, site directed mutagenesis, cloning, Western blotting, chromatin immune precipitation (ChIP), lentivirus preparation and infection, siRNA, transfection, immunofluorescence, confocal microscopy, flow cytometry.

Development of Orthotopic mouse model of cancer, intracerebral injections of brain tumor cells, mice handling for various routes of injection like subcutaneous, intraperitoneal.

Testing of synthetic and natural compounds on mouse models, in vivo bio distribution, pharmacokinetics.

### Publications:

Best five publications:

- 1) **Neha Garg**, D Bakhshinyan, C Venugopal, S Mahendram, DA Rosa, T Vijayakumar, B Manoranjan, R Hallett, N McFarlane, KH Delaney, JM Kwiecien, CC Arpin, P-S Lai, RF Gómez-Biagi, AM Ali, ED de Araujo, OA Ajani, JA Hassell<sup>1</sup>, PT Gunning and SK Singh.

CD133+ brain tumor initiating cells are dependent on STAT3 signaling to drive medulloblastoma recurrence. *Oncogene*, 2017, 36, 5, 606. (IF=6.634)

- 2) Mohini Singh, **Neha Garg**, Chitra Venugopal, Robin Hallett, Tomas Tokar, Nicole McFarlane, Sujeivan Mahendram, David Bakhshinyan, Branavan Manoranjan, Parvez Vora, Maleeha Qazi,Carolynn C Arpin, Brent Page, Sina Haftchenary, David A Rosa, Ping-Shan Lai, Rodolfo F Gómez-Biagi, Ahmed M Ali, Andrew Lewis, Mulu Geletu, Naresh K Murty, John A Hassell, Igor Jurisica, Patrick T Gunning, Sheila K Singh. STAT3 pathway regulates lung-derived brain metastasis initiating cell capacity through miR-21 activation. *Oncotarget*. 2015, 6 (29), 27461. (IF=5.168)
- 3.) Evelina Miele, Francesca Romana Buttarelli, Antonella Arcella, Federica Begalli, **Neha Garg**, Marianna Silvano, Agnese Po, Caterina Baldi, Giuseppe Carissimo, Manila Antonelli, Gian Paolo Spinelli, Carlo Capalbo, Vittoria Donofrio, Isabella Morra, Paolo Nozza, Alberto Gulino, Felice Giangaspero, Elisabetta Ferretti. High-throughput microRNA profiling of pediatric high-grade gliomas. *Neuro-Oncology* 2014; Jan;16(2):228-40. (IF=10.091)
- 4.) **Neha Garg**, Agnese Po, Evelina Miele, Antonio Francesco Campese, Federica Begalli, Marianna Silvano, Paola Infante, Carlo Capalbo, Enrico De Smaele, Gianluca Canettieri, Lucia Di Marcotullio, Isabella Screpanti, Elisabetta Ferretti, Alberto Gulino. microRNA-17-92 cluster is a direct Nanog target and controls neural stem cell through Trp53inp1. *EMBO J*. 2013; 32(21): 2819–2832. (IF=11.227)
- 5.) P Rosato, E Anastasiadou, **N Garg**, D Lenze, F Boccellato, S Vincenti, M Severa, EM Coccia, R Bigi, M Cirone, E Ferretti, AF Campese, M Hummel, L Frati, C Presutti, A Faggioni, P Trivedi. Differential regulation of miR-21 and miR-146a by Epstein-Barr virus-encoded EBNA2. *Leukemia* 2012 Nov;26(11):2343-52. (\*Co-first authors). (IF=9.944)

#### All publications:

- 1.) R Rani, A Singh, **N Garg\***, N Kaur\*, N Singh\*. Mitochondria and nucleolus targeted copper (I) complexes with pyrazole-linked triphenylphosphine moieties for live cell imaging. DOI: 10.1039/C9AN01513B (Paper) *Analyst*, 2019, Accepted Manuscript. (IF= 4.019)
- 2.) Suman Srivastava, Neha Thakur, Ashutosh Singh, Poonam Shukla, Vipin Kumar Maikhuri, **Neha Garg**, Ashok Prasad and Rampal Pandey. Development of a fused imidazo[1,2-a]pyridine based fluorescent probe for Fe<sup>3+</sup> and Hg<sup>2+</sup> in aqueous media and HeLa cells. *RSC Adv.*, 2019, 9, 29856 (IF=3.049)
- 3.) R Kumar\*, A Singh, **N Garg\***. Acoustic cavitation assisted hot melt mixing technique for solid lipid nanoparticles formulation, characterization, and controlled delivery of poorly water soluble drugs. *Journal of Drug Delivery Science and Technology*, 101277, 2019. (IF=2.297)
- 4.) R Kumar, A Singh, K Sharma, D Dhasmana, **N Garg**, PF Siril. Preparation, characterization and in vitro cytotoxicity of Fenofibrate and Nabumetone loaded solid lipid nanoparticles. *Materials Science and Engineering: C*, 110184, 2019. (IF=4.959)
- 5.) Mayank, A Singh, N Kaur\*, **N Garg\***, N Singh\*. Anticancer SAR Establishment and Novel Accruing Signal Transduction Model of Drug Action Using Biscoumarin Scaffold. *Computational Biology and Chemistry*, 107104, 2019 (IF=1.581)

- 6.) R Kumar\*, A Singh, **N Garg\***. Acoustic Cavitation-Assisted Formulation of Solid Lipid Nanoparticles using Different Stabilizers. *ACS Omega*, 2019 (IF=2.584)
- 7.) JS Sidhu, S Sharma, A Singh, **N Garg**, N Kaur, N Singh. A naphthalimide-based novel "Turn-On" fluorescence approach for the determination of uric acid and monitoring of xanthine oxidase activity. *Analytical Methods*, 2019, 11 (32), 4190-4196 .(IF= 2.073 )
- 8.) Ashish Tiwari, Ashutosh Singh, Ayan Debnath, Ankur Kaul, **Neha Garg\***, Rashi Mathur\*, Anup Singh\*, Jaspreet Kaur Randhawa\*. Multifunctional Magneto-Fluorescent Nanocarriers for Dual Mode Imaging and Targeted Drug Delivery. *ACS Applied Nano Materials* **Pub Date : 2019-04-11** , DOI: 10.1021/acsanm.9b00421.
- 9.) Verma, Navneet Chandra; Rao, Chethana; Singh, Ashutosh; **Garg, Neha**; Nandi, Chayan Kanti. Dual Responsive Specifically Labelled Carbogenic Fluorescent Nanodot for Super Resolution and Electron Microscopy. *Nanoscale*, 2019,11, 6561-6565. (IF=6.970)
- 10.)David Bakhshinyan, Chitra Venugopal, Ashley A Adile, **Neha Garg**, Branavan Manoranjan, Robin Hallett, Xin Wang, Sujeivan Mahendram, Parvez Vora, Thusyanth Vijayakumar, Minomi Subapanditha, Mohini Singh, Michelle Masayo Kameda-Smith, Maleeha Qazi, Nicole McFarlane, Aneet Mann, Olufemi A Ajani, Blake Yarascavitch, Vijay Ramaswamy, Hamza Farooq, Sorana Morrissy, Liangxian Cao, Nadiya Sydorenko, Ramil Baiazitov, Wu Du, Josephine Sheedy, Marla Weetall, Young-Choon Moon, Chang-Sun Lee, Jacek M Kwiecien, Kathleen H Delaney, Brad Doble, Yoon-Jae Cho, Siddhartha Mitra, David Kaplan, Michael D Taylor, Thomas W Davis, Sheila K Singh. BMI1 is a therapeutic target in recurrent medulloblastoma *Oncogene*, 2019, 38, 10, 1702–1716 (IF=6.634)
- 11.)Sidhu, Jagpreet Singh; Singh, Ashutosh; **Garg, Neha**; Kaur, Navneet; Singh, Narinder. Gold conjugated carbon dots nano assembly: FRET paired fluorescence probe for cysteine recognition. *Sensors and Actuators B: Chemical*. 2019. 282, 512-522. (IF=6.393)
- 12.)Reddy, Kumbam Lingeshwar; Sharma, Peeyush Kumar; Singh, Ashutosh; Kumar, Ajay; Shankar, Konathala Ravi; Singh, Yashveer; **Garg, Neha\***; Krishnan, Venkata\*. Amine-functionalized, porous silica-coated NaYF<sub>4</sub>: Yb/Er upconversion nanophosphors for efficient delivery of doxorubicin and curcumin. *Materials Science and Engineering: C*. 2019, 96, 86-95(IF=4.959)
- 13.)Raj, Pushap; Singh, Amanpreet; Singh, Ajnesh; Singh, Ashutosh; **Garg, Neha**; Kaur, Navneet; Singh, Narinder. Pyrophosphate Prompted Aggregation Induced Emission: Chemosensor Studies, Cell Imaging, Cytotoxicity, and Hydrolysis of the Phosphoester Bond with Alkaline Phosphatase. *European Journal of Inorganic Chemistry*. 2019, 5, 628-638. (IF=3.50)
- 14.)Garg, Alok\*; Singhania, Tejasvi; Singh, Ashutosh; Sharma, Shilpa; Rani, Sonam; Neogy, Ananya; Yadav, Shri Ram; Sangal, Vikas Kumar; **Garg, Neha\***. Photocatalytic Degradation of Bisphenol-A using N, Co Codoped TiO<sub>2</sub> Catalyst under Solar Light. *Scientific Reports*, 2019, 9, 1, 765. (IF=4.011)

- 15.) Rao, Chethana; Singh, Ashutosh; Verma, Navneet Chandra; **Garg, Neha\***; Nandi, Chayan Kanti\*. One Pot Synthesis of Amphiphilic Carbogenic Fluorescent Nanodots for Bioimaging. *ChemNanoMat*, 2019, 5, 417-421(IF=2.507)
- 16.) Kumar, Ankur; Liang, Brooke; Aarthy, Murali; Singh, Sanjeev Kumar; **Garg, Neha**; Mysorekar, Indira U; Giri, Rajanish. Hydroxychloroquine Inhibits Zika Virus NS2B-NS3 Protease. *ACS Omega*. 2018. 3, 12, 18132-18141. (IF=2.58)
- 17.) D Dhasmana, A Singh, R Shukla, T Tripathi, **N Garg\***. Targeting Nucleotide Binding Domain of Multidrug Resistance-associated Protein-1 (MRP1) for the Reversal of Multi Drug Resistance in Cancer. *Scientific reports*, 2018, 8 (1), 11973. (IF=4.011)
- 18.) JS Sidhu, A Singh, **N Garg**, N Kaur, N Singh. A highly selective naphthalimide-based ratiometric fluorescent probe for the recognition of tyrosinase and cellular imaging. *Analyst*, 2018, 143 (18), 4476-4483(IF=4.019)
- 19.) JS Sidhu, A Singh, **N Garg**, N Kaur, N Singh. Carbon dots as analytical tools for sensing of thioredoxin reductase and screening of cancer cells. *Analyst*, 2018, 143 (8), 1853-1861(IF=4.019)
- 20.) Raj Kumar, Ashutosh Singh, **Neha Garg**, Prem Felix Siril. Solid lipid nanoparticles for the controlled delivery of poorly water soluble nonsteroidal anti-inflammatory drugs. *Ultrasonics Sonochemistry*, 2018, 40, 686-696(IF=7.279)
- 21.) Alok Garg, Ashutosh Singh, Vikas Sangal[...] **Neha Garg\***. Synthesis, Characterization and anticancer activities of metal ions Fe and Cu doped and co-doped TiO<sub>2</sub>. *New Journal of Chemistry*, 2017, 41 (18), 9931-9937. (IF=3.069)
- 22.) Jagpreet Singh Sidhu, Ashutosh Singh, **Neha Garg** and Narinder Singh. Carbon Dot Based, Naphthalimide Coupled FRET Pair for Highly Selective Ratiometric Detection of Thioredoxin Reductase and Cancer Screening. *ACS Applied Materials & Interfaces*, 2017, 9 (31), 25847-25856(IF=8.097)
- 23.) Tiwari, Ashish; Singh, Ashutosh; **Garg, Neha\***; Randhawa, Jaspreet K\*; Curcumin encapsulated zeolitic imidazolate frameworks as stimuli responsive drug delivery system and their interaction with biomimetic environment *Scientific Reports*, 2017, 7,1,12598 Nature Publishing Group (Top 100 articles in chemistry from *Scientific Reports* in 2017) (IF=4.011)
- 24.) **Neha Garg**, D Bakhshinyan, C Venugopal, S Mahendram, DA Rosa, T Vijayakumar, B Manoranjan, R Hallett, N McFarlane, KH Delaney, JM Kwiecien, CC Arpin, P-S Lai, RF Gómez-Biagi, AM Ali, ED de Araujo, OA Ajani, JA Hassell1, PT Gunning and SK Singh. CD133+ brain tumor initiating cells are dependent on STAT3 signaling to drive medulloblastoma recurrence. *Oncogene*, 2017, 36, 5, 606. (IF=6.634)
- 25.) Vinoth Rajendran, Gulam Mustafa Hasan, Neeraj kumar, Suparna Dutt, **Neha Garg**, Pooja Tiwari and Prahlad C. Ghosh. Therapeutic Efficacy Of Chloroquine In Long Circulating Liposome Formulations Against Chloroquine-Resistant Plasmodium Berghei Infection In Mice. *European Journal of Biomedical and Pharmaceutical sciences*, 2016, Volume 3, Issue 11. (IF=3.532)
- 26.) Giuseppina Catanzaro, Zein Mersini Besharat, **Neha Garg**, Maurizio Ronci, Luisa Pieroni, Evelina Miele, Angela Mastronuzzi, Andrea Carai, Vincenzo Alfano, Agnese Po, Isabella Screpanti, Franco Locatelli, Andrea Urbani and Elisabetta Ferretti. microRNAs-proteomic networks characterizing human medulloblastoma- SLCs. *Stem Cells Int*. 2016;2016:2683042. (IF=3.989)

- 27.) Mohini Singh, **Neha Garg**, Chitra Venugopal, Robin Hallett, Tomas Tokar, Nicole McFarlane, Sujeivan Mahendram, David Bakhshinyan, Branavan Manoranjan, Parvez Vora, Maleeha Qazi,Carolynn C Arpin, Brent Page, Sina Haftchenary, David A Rosa, Ping-Shan Lai, Rodolfo F Gómez-Biagi, Ahmed M Ali, Andrew Lewis, Mulu Geletu, Naresh K Murty, John A Hassell, Igor Jurisica, Patrick T Gunning, Sheila K Singh. STAT3 pathway regulates lung-derived brain metastasis initiating cell capacity through miR-21 activation. *Oncotarget*. 2015, 6 (29), 27461. (IF=5.168)
- 28.) Chitra Venugopal, Robin Hallett, Parvez Vora, Branavan Manoranjan, Sujeivan Mahendram, Maleeha A Qazi, Nicole McFarlane, Minomi Subapanditha, Sara M Nolte, Mohini Singh, David Bakhshinyan, **Neha Garg**, Thusyanth Vijayakumar, Boleslaw Lach, John P Provias, Kesava Reddy, Naresh K Murty, Bradley W Doble, Mickie Bhatia, John A Hassell, Sheila K Singh. Pyrvinium targets CD133 in human glioblastoma brain tumor-initiating cells. *Clinical Cancer Research*, 2015, 21, 23, 5324-533. (IF=8.911)
- 29.) Eleni Anastasiadou, **Neha Garg**, Rachele Bigi, Shivangi Yadav, Antonio Francesco Campese, Caterina Lapenta, Massimo Spada, Laura Cuomo, Annalisa Botta, Filippo Belardelli, Luigi Frati, Elisabetta Ferretti, Alberto Faggioni, Pankaj Trivedi. Epstein-Barr virus infection induces miR-21 in terminally differentiated malignant B cells. *International Journal of Cancer*, 2015, 137 (6), 1491-1497 (IF=6.513)
- 30.) **N Garg\***, T Vijayakumar, D Bakhshinyan, C Venugopal, SK Singh. microRNA regulation of Brain Tumor Initiating Cells in Central Nervous System Tumors. *Stem Cells International*, 2015 (Stem Cells Int. 2015; 2015: 141793. Published online 2015 May 3. doi: 10.1155/2015/141793. (IF=3.989)
- 31.) Evelina Miele, Francesca Romana Buttarelli, Antonella Arcella, Federica Begalli, **Neha Garg**, Marianna Silvano, Agnese Po, Caterina Baldi, Giuseppe Carissimo, Manila Antonelli, Gian Paolo Spinelli, Carlo Capalbo, Vittoria Donofrio, Isabella Morra, Paolo Nozza, Alberto Gulino, Felice Giangaspero, Elisabetta Ferretti. High-throughput microRNA profiling of pediatric high-grade gliomas. *Neuro-Oncology* 2014; Jan;16(2):228-40. (IF=10.091)
- 32.) **Neha Garg**, Agnese Po, Evelina Miele, Antonio Francesco Campese, Federica Begalli, Marianna Silvano, Paola Infante, Carlo Capalbo, Enrico De Smaele, Gianluca Canettieri, Lucia Di Marcotullio, Isabella Screpanti, Elisabetta Ferretti, Alberto Gulino. microRNA-17-92 cluster is a direct Nanog target and controls neural stem cell through Trp53inp1. *EMBO J*. 2013; 32(21): 2819–2832. (IF=11.227)
- 33.) P Rosato, E Anastasiadou, **N Garg**, D Lenze, F Boccellato, S Vincenti, M Severa, EM Coccia, R Bigi, M Cirone, E Ferretti, AF Campese, M Hummel, L Frati, C Presutti, A Faggioni, P Trivedi. Differential regulation of miR-21 and miR-146a by Epstein-Barr virus-encoded EBNA2. *Leukemia* 2012 Nov;26(11):2343-52. (\*Co-first authors) (IF=9.944)
- 34.) Gulam Mustafa Hasan#, **Neha Garg#**, Enna Dogra, Ranu Surolia, Prahlad Chandra Ghosh. Inhibition of the Growth of Plasmodium falciparum in Culture by Stearylamine- Phosphatidylcholine Liposomes. *J Parasitol Res*. 2011; 2011:120462. (#Co-first authors)

### Book Chapters

- 1) **Neha Garg**, Prateek Kumar, Kundlik Gadhave, Rajanish Giri. The dark proteome of cancer: Intrinsic disorder and functionality of HIF-1 $\alpha$  along with its interacting

proteins. (Book chapter in “Dancing Protein Clouds: Intrinsically Disordered Proteins in the Norm and Pathology”), *Academic Press*, 166, 371, 2019.

- 2) Manoranjan B, **Garg N**, Bakhshinyan D, Singh SK. The Role of Stem Cells in Pediatric Central Nervous System Malignancies. *Adv Exp Med Biol.* 2015;853:49-68. doi: 10.1007/978-3-319-16537-0\_4 (Book Chapter in “Stem Cell Biology in Neoplasms of the Central Nervous System”, Springer Publisher.
- 3) David Bakhshinyan, Maleeha Qazi, **Neha Garg**, Chitra Venugopal, Nicole McFarlane and Sheila K Singh. Chapter: Isolation and Identification of Neural Cancer Stem/Progenitor Cells. Online: 6 MAR 2015, DOI: 10.1002/9781118670613.ch8, 2015 John Wiley & Sons, Ltd (Book Chapter in Principles of Stem Cell Biology and Cancer, Future Applications and Therapeutics)

#### Conference papers

- 1) Sheila K. Singh, Branavan Manoranjan, Chitra Venugopal, Parvez Vora, Nicole McFarlane, **Neha Garg** et al. Sox2 identifies the treatment-refractory stem cell population in group 2 medulloblastoma. *Neuro-Oncology* 16:iii1–iii22, 2014. doi:10.1093/neuonc/nou206.16.
- 2) David Bakhshinyan, Thusyanth Vijayakumar, **Neha Garg** et al. Discovering the treatment refractory BTIC population in group 3 medulloblastoma. *Neuro- Oncology* 17:iii1–iii40, 2015. doi:10.1093/neuonc/nov061.90.
- 3) Sheila K. Singh, **Neha Garg** et al. Bmi1 is a therapeutic target in recurrent medulloblastoma. *Cancer Research*, DOI: 10.1158/1538-7445.AM2016-2475 Published 15 July 2016.
- 4) Chitra Venugopal, Robin Hallett,....**Neha Garg** et al. Pyruvate targets Cd133 in human glioblastoma brain tumor-initiating cells. *Neuro-Oncology* 17:v208–v213, 2015. doi:10.1093/neuonc/nov234.23.
- 5) **Garg N** et al. PS1 - 170 Bmi1 is a Therapeutic Target in Recurrent Childhood Medulloblastoma October 2016 · The Canadian journal of neurological sciences. *Le journal canadien des sciences neurologiques* 10/2016; 43(S4):S10. DOI:10.1017/cjn.2016.358
- 6) David Bakhshinyan, **Neha Garg** et al. TRTH-13. BMI1 IS A THERAPEUTIC TARGET IN RECURRENT MEDULLOBLASTOMA *Neuro-Oncology* 19(suppl\_4):iv54-iv54 · June 2017 DOI: 10.1093/neuonc/nox083.225.

#### Financial support:

##### Completed:

Title of the project	Funding agency	Amount/ (Rs)	Period
<i>Identification of the Hedgehog pathway modulators in non-small cell lung cancer stem cells</i>	SERB-DST (INSPIRE fellowship)	35 lakhs	11/04/2015 to 07/31/2016
BioX Consortium seed funding: Surface-modified upconversion nanoparticles for theranostic applications in cancer. (as co-PI, PI: Dr. Venkata Krishnan)	IIT Mandi	7 lakhs (Mandi side) Total=14 lakhs	Completed

##### In progress:

Title of the project	Funding agency	Amount/ (Rs)	Period
<i>Deciphering the MicroRNAs controlled by c-Myc in medulloblastoma (MB) stem cells</i>	SERB-DST (Ramanujan)	1.02 crores	08/01/2016 to 07/31/2021



	fellowship)		
<i>Early career Research grant: Role of microRNAs controlled by c-Myc and Bmi1 in human gliomas and glioma stem cells</i>	SERB	47.57 lakhs	01/10/2018 to 30/09/2021
BioX Consortium seed funding: Design, green syntheses, characterization of organic-inorganic nanohybrides and evaluation of anticancer activities using invitro and invivo systems. (as PI, co-PI: Dr. Chayan K Nandi, Dr. Ramna Thakur)	IIT Mandi	10 lakhs (Mandi side) Total=20 lakhs	In Progress
BioX Consortium seed funding: Synthetic developemnt and characterization of 3D carbon nanotube/PVA scaffolds for bone tissue engineering applications. (as co-PI, PI: Dr. Prem Felix Siril)	IIT Mandi	10 lakhs (Mandi side) Total=20 lakhs	In Progress

### Awards

- 1) Awarded **DST-INSIPRE Faculty** award 2015, DST, India
- 2) Awarded from Science and Engineering Research Board, India, **RAMANUJAN Fellowship**, 2015, India
- 3) Travel award for attending Young Investigator meeting (YIM) 2016, Manesar, Gurgaon, India (27 Februray-2 March, 2016).
- 4) Travel Award for 2014 Till & McCulloch Meetings, Stem Cell Network at Hotel Westin, Ottawa, Canada (October 27- 29, 2014).
- 5) Two Travel Awards (OIRM: Ontario Institute for Regenerative Medicine and SCN: Stem Cell Network) for 2015 Till & McCulloch Meetings, Stem Cell Network at Sheraton Centre Hotel, Toronto, Canada (October 26-28, 2015).
- 6) Postdoctoral Fellowship, McMaster University, Hamilton, Canada: November 2013-October 2015
- 7) Sapienza Post Doctoral Fellowship, Department of Molecular Medicine, University of Rome 'La Sapienza', Italy: August 2013-October 2013
- 8) **Marie Curie Fellow**, Early stage researcher, European Union: Aug 2010-July 2013
- 9) Qualified GATE 2008 conducted by IIT, Kanpur with **99.89** percentile marks in the subject Life Sciences. Secured **13** All India Rank.
- 10) Qualified Joint CSIR-UGC JRF in 2007 (both June and December). Received three-interview call letters/shortlisted for prestigious Dr. Shyama Prasad Mukherjee fellowship (SPMF) (two from CSIR-UGC and one from GATE).
- 11) Monsanto Scholarship during MSc Biochemistry, Government of India: 2006-2008
- 12) Silver Jubilee Merit Scholarship during BSc Biochemistry, Government of India: 2003-2006
- 13) Delhi University (North Campus) topper in B.Sc. Biochemistry: 2003-2006

### Students guided

Name	Program (UG/MS/ PhD/Intern)	Research Area/Topic	Registration Month/Year	Status (completed/ submitted/ongoing)	Co-Guides
Divya Dhasmana	MTech	Developing Metal Organic Framework	July 2016 – May 2018	Completed	



		<i>Nanocarrier Encapsulating Methotrexate and p-Glycoprotein Inhibitor for Overcoming Multidrug Resistance in Cancer</i>			
<i>Sandesh Kumar Patel</i>	<i>Mtech</i>	<i>Intracellular Helices (ICH) potential target for inhibiting p-Glycoprotein Mediated Drug Efflux for Cancer Treatment</i>	<i>July 2017 – May 2019</i>	<i>Completed</i>	
<i>Shahida Siddiqui</i>	<i>Mtech</i>	<i>Network Mapping of Active TB and MDR TB Co-infection and its Comorbidities</i>	<i>July 2017 – May 2019</i>	<i>Completed</i>	<i>Dr Sarita Azad</i>
<i>Anjali Dabral</i>	<i>M.Sc. (Gautam Buddha University)</i>	<i>Curcumin and EGCG Encapsulated ZIF8 Framework Nanocarriers Against Multidrug Resistance in Cancer</i>	<i>July 2017 – May 2019</i>	<i>Completed</i>	

<i>Deepanshu Verma</i>	<i>Mtech</i>	<i>Cancer Biology</i>	<i>July 2018 – May 2020</i>	<i>Ongoing</i>	<i>Dr. Rajanish Giri</i>
<i>Ashutosh Kumar Singh</i>	<i>Mtech</i>	<i>MicroRNA in Cancer</i>	<i>July 2018 – May 2020</i>	<i>Ongoing</i>	<i>Dr. Sarita Azad</i>
<i>Namyashree Nayak</i>	<i>Research Associate</i>	<i>MicroRNA in Brain Cancer</i>	<i>Jan 2019 till date</i>	<i>Ongoing</i>	
<i>Ashutosh Singh</i>	<i>PhD</i>	<i>Medulloblastoma Cancer Stem Cells</i>	<i>Feb 2016- till date</i>	<i>Ongoing</i>	<i>Dr Prem Felix Siril</i>
<i>Preeti Rathi</i>	<i>PhD</i>	<i>Glioblastoma cancer stem cells</i>	<i>August 2019-till date</i>	<i>Ongoing</i>	<i>Dr Prem Felix Siril</i>

### **Meetings and Presentations**

- 1) The International Satellite Meeting to the 13th Human Genome Meeting 2008, on “Genomics, Model Organisms and Diseases” organized at National Centre for Biological Sciences (NCBS), Bangalore, India (01-02 October, 2008).
- 2) Poster Presentation entitled “Stearylamine Liposomes in the treatment of Malaria” by Neha Garg\*, Gulam Mustafa Hasan and Prahlad C Ghosh at 49th Annual Conference of AMI, International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics at New Delhi, India (18th – 20th December 2008).
- 3) HEALING Scientific Meeting at Rome, Italy (October 20-23, 2010).
- 4) International Meeting on Hedgehog-Gli Signalling in Regeneration, Stem Cells and Cancer at Kolymbari, Crete, Greece (20-25 June 2011).
- 5) Poster presentation entitled “Evolutionary conservation of role of microRNAs in neural stem cells” by Neha Garg\*, Elisabetta Ferretti and Alberto Gulino at EMBO workshop on “Evolution in the time of genomics” at Venice, Italy (May 7-9, 2012).
- 6) Healing scientific meeting at Stockholm, Sweden (29th May-1st June, 2012).
- 7) Attended FISV (Federazione Italiana Scienze della Vita) 2012 congress, Rome, Italy (24-27th September).
- 8) Keystone symposia on Molecular and Cellular Biology, Noncoding RNAs in Development and Cancer, Fairmont Hotel Vancouver, British Columbia, Canada (19th-25th January, 2013) and poster presentation entitled “The role of microRNAs in neural stem cells” by Neha Garg\*, Elisabetta Ferretti and Alberto Gulino at the same meeting.
- 9) Healing Summer School and Hedgehog-Gli meeting (Poster Presentation) organized by FP7 Project Healing, Marie Curie, European Union, at Arolla, Switzerland (18-25th August, 2013).
- 10) Poster presentation entitled “Epstein-Barr Virus Alters Phenotype of Multiple Myeloma Cells Through Upregulation of miR-21” by Shivangi Yadav, Eleni Anastasiadou, Rachele Bigi, Neha Garg, Elisabetta Ferretti, Luigi Frati, Alberto Faggioni, Pankaj Trivedi at Italian

Pathology and Translational Medicine Society (SIPMET) YOUNG SCIENTISTS MEETING, Rome, October 23rd-24th, 2013.

- 11) Poster presentation titled "Potential role of STAT3 pathway in regulating tumour initiating cells to and within the central nervous system" by Garg N\*, Singh M, Bakhshinyan D, Vora P, Venugopal C, McFarlane N, Manoranjan B, Mahendram S, Gunning P, Singh SK. Organized by Stem Cell Network at Hotel Westin, Ottawa, Canada (October 27- 29, 2014), Abstract No. 148.
- 12) Poster presentation titled "Activated Wnt signaling targets Sox2+ treatment refractory medulloblastoma stem cells" by Manoranjan B\*, Mahendram S, Vijaykumar T, Bakhshinyan D, Hallet R, Garg N, Venugopal C, McFarlane N, Hassel J, Doble BW, Singh SK. Abstract No. 135. Ottawa, Canada (October 27- 29, 2014): Till & McCulloch Meetings. 2014.
- 13) Poster presentation titled "Pyrvinium selectively targets Glioblastoma brain tumour initiating cells" by C. Venugopal\*, R. Hallett, P. Vora, M. Qazi, B. Manoranjan, N. McFarlane, S. Mahendram, M. Singh, N. Garg, J. Hassell and S. Singh. Abstract No. 147. Ottawa, Canada (October 27-29, 2014): Till & McCulloch Meetings. 2014.
- 14) Poster presentation titled "Clonal evolution of Medulloblastoma brain tumour- initiating cells (BTICs) in response to therapy: Discovering the refractory BTIC population" by Bakhshinyan D\*, Garg N, Venugopal C, Mann A, Vora P, Singh M, van Ommeren R, McFarlane N, Singh Manoranjan B, Qazi M, Scheinemann K, MacDonald P, Delaney K, Whitton A, Dunn S, Singh SK. Abstract No. 134. Ottawa, Canada (October 27-29, 2014): Till & McCulloch Meetings. 2014.
- 15) Poster presentation titled "Potential role of CD133 driven STAT3 pathway in group3 medulloblastoma" by Neha Garg, Robin Hallett, David Bakhshinyan, Thusyanth Vijayakumar, Sujeivan Mahendram, Branavan Manoranjan, Chitra Venugopal, Nicole McFarlane, David Rosa, Patrick Gunning, Sheila K. Singh\*. Organized by Stem Cell Network at Sheraton Centre Hotel, Toronto, Canada (October 26-28, 2015), Abstract No. 128.
- 16) Young Investigator meeting (YIM) 2016, Manesar, Gurgaon, India (27 February-2 March, 2016).
- 17) Poster Presentation at the 1<sup>st</sup> Joint Conclave of DST-DBT-SERB for fellows at Hotel Marriott, Jaipur (8-10 June 2018).

#### Courses:

- 1) Courses on Ethics and Business Development at Rome, Italy (October 20-23, 2010).
- 2) Professional Development short course on Stem Cells: A Pathway through the Maze, Department for Continuing Education at University of Oxford, UK (9-10 December 2010).
- 3) 1st HEALING Summer School on Hedgehog Gli signalling at Kolymbari, Crete, Greece (20-25 June 2011).
- 4) The Cambridge Neural Stem Cell Symposium at Cambridge, UK (4 Sept-6 Sept, 2011).
- 5) Continuation of Scientific Research Training under EU FP7-ITN in Prof. Fiona Watt Laboratory (Epidermal Skin Cell Biology), to learn the techniques for studying keratinocytes at CRI and CS-CR, Cambridge, UK (7-9 September, 2011).
- 6) Healing scientific meeting and Courses on Medicinal Chemistry, Communicating your research and Proposal writing at Stockholm, Sweden (29th May-1st June, 2012).
- 7) EMBL course on Laboratory animal science VI: Organized by European Molecular Biology Laboratory, Mouse Biology Unit, Monterotondo, Rome, Italy (15-26 April, 2013).
- 8) diXa: Microarray Analysis using R and Bioconductor course organized by European Molecular Biology Laboratory-European Bioinformatics Institute, CB10 1SD, United Kingdom (14-16 May, 2013).

#### Invited talk :

- 1) Recent developments in medical biotechnology and structure based drug designing, IIT-Guwahati (6-7 December, 2015)
- 2) International Conference on Translational Biotechnology, MNIT Allahabad (4-6 February, 2016)

- 3) Invited talk in Molecular pathology association of India, March12-13, 2016
- 4) Invited talk at 3rd South Asian Biotechnology Conference, Nepal, March 16-18, 2017
- 5) Invited talk at Targeted Cancer Therapies and biofluid Biopsies, Bengaluru, May25-26, 2017.
- 6) Invited for PAN-IIT Cancer meet in IIT Madras, 2019.
- 7) Invited for YIM-2019 as young investigator, Guwahati.

**Association with professional bodies:**

- 1) Association of Microbiologists of India (Life member, registered 2008)
- 2) American Society for Microbiology 2008-2009 (Member # - 56477912)
- 3) Stem Cell Network, Canada
- 4) European Union (ITN FP7)
- 5) Indian Science Congress Association (Life member), membership No. L28755
- 6) Proteomics Society India (Life Member), membership No. 293
- 7) National Academy of Biological Sciences, NABS (Life Member), membership No. LM-001-16
- 8) Society of Biological Chemists (Life Member), membership No. 3719
- 9) Molecular Pathology Association of India (Life member), membership No. MPAI/LM-0120
- 10) Biotech Research Society of India (Life member)