

Dr. Sunil Babu Gosipatala

M.Sc. & Ph.D. Biochemistry

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Research Interests:

Our lab is primarily engaged in unraveling the viral miRNAs role in establishing the latency and survival in the human body. Viral miRNAs are of great interest as they help the virus in both the lytic and latent phases and also survival of virus in the hosts, by regulating the viral as well as host biological pathways. To decipher the viral miRNA's role, we use various bioinformatic tools, by doing so, we reported the oncogenic nature of Epstein Barr Virus miRNA, i.e., mir-BART-5 first time. In continuation, we also reported the Human cytomegalovirus (HCMV) miRNA's role in downregulating the cellular Apoptosis and Autophagy. Currently, we are focusing in proving our *In silico* results in *In Vitro*. HCMV is ubiquitous human pathogen establishing lifelong latency in humans, causing significant morbidity and mortality in immunocompromised individuals and neonates. Being the *Herpesvirinae* family of viruses it exhibits long latent periods in humans. In India, it exhibits almost 90% seropositivity, it can pose potential health burden in coming days, as immunocompromised population is increasing in India. Immunocompromised state is acquired by the body due several factors, which include living style, immunosuppressive therapy and immunodeficiency, HCMV becomes potential threat- causing a number of diseases including birth abnormalities and vascular diseases. Current research on HCMV indicates a positive correlation to carcinogenesis in humans. Currently HCMV infections were treated with antiviral drugs such as ganciclovir, valganciclovir etc., drug resistance became a major challenge in dealing the HCMV infections. So, an alternative, augmentative therapy which manage both the latent and neonatal HCMV infections effectively is the need of the hour. So, our basic studies on HCMV miRNA role on cellular pathways were discovered, we can extend our findings on the possibility of miRNA based therapeutic strategies along with vaccines.

Parallally, we are also engaged in deciphering the role of protooncogene(s) / tumor suppressor gene(s) mutations and their role in Cancer progression in relation to the North Indian population for period of more than 10 years. Daily basis we perform DNA isolation from human blood and tissue; amplifying the required DNA lengths by doing PCR. While doing so we use various bioinformatic tools in primer designing and do T_A cloning. Further these amplified fragments were sequenced; amino acid composition was analyzed and check for mutations/SNPs.

Current positions:

- Member Secretary, Institutional Ethics Committee, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh- 226025. (21st July, 2015 to Date)
- Member Secretary, Institutional Biosafety Committee, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh- 226025. (2nd August, 2016 to Date)
- Assistant Professor, Department of Biotechnology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh- 226025. (Sept, 2005 to Date)

Previous position:

- Reader, Department of Biochemistry, Bundelkhand University, Jhansi, Uttar Pradesh (Jan, 2005 to Sept 2005)
- Lecturer, Department of Biochemistry, Bundelkhand University, Jhansi, Uttar Pradesh (May, 2001 to Jan 2005)

Education:

M.Sc. Biochemistry (1995)

Andhra University, Visakhapatnam, AP, India

Ph.D. Biochemistry (2006)

Andhra University, Visakhapatnam, AP, India (Isolation and identification of Immunomodulatory compounds from the bark of “*Avicennia officinalis*”).

International Visits:

JAPAN (14th International Congress of Immunology) during 2010.

Project (Principal Investigator/ Co- Investigator)

- **Principal Investigator** in DST-SERB funded project under Empowerment and Equity Opportunity and Excellence in Science (EEQ) entitled “**Investigation(s) of HCMV miRNAs role on cellular autophagy**” (20th March, 2018 to Date and Budget 46.56 Lakhs).
- **Principal Investigator** in DBT funded project entitled “**Identification of HCMV miRNA to overcoming cellular Apoptosis**” (1st June, 2017 to Date and Budget 74.88 Lakhs).
- **Co- Principal Investigator** in DBT funded project entitled “***In silico* search for potential siRNA sequence to develop Gemini virus Resistance Papaya Virus**” (6th August, 2010 to 5th August, 2014 Funded 24.82 Lakh .)

Awards and Honors

1. Stood **first position** in the Winter School organized by CIMAP i.e., CWS-2008.
2. Awarded **Gold medal** for paper presentation on free papers category in VI National conference of Indian Academy of Allergy (IAACON-2005) Visakhapatnam, India, sponsored by Talwar foundation, New Delhi.
3. Qualified CSIR-UGC, NET with Lectureship; AP-SLET in Biochemistry in 1999
4. Qualified GATE-95 with 70.67 percentile and awarded JRF and SRF fellowships from UGC-GATE
5. Awarded Merit Scholarship by Govt. of Andhra Pradesh, for securing the 6th rank in M.Sc., Biochemistry at Andhra University level in the year 1995.
6. Awarded National Talent search examination scholarship at High school level, in ZPP High School Ravipadu, Prakasam- Dist, Andhra Pradesh.
7. Nominated by the Babasaheb Bhimrao Ambedkar University to attend the 1st Nobel Science Conclave in India organized by IIIT, Allahabad in Dec, 2008

Total Publications :27+2 (Total Impact Factor:34.04)

1. Piyush Chaudhary, **Gosipatala Sunil Babu** and Ranbir Chander Sobti (2019). HGF regulate HTR-8/SVneo trophoblastic cells migration/invasion under hypoxic conditions through increased HIF-1 alpha expression via MAPK and PI3K pathways. J Cell Communication and signalling .(<https://doi.org/10.1007/s12079-019-00505-X>)(I.F.2.516).
2. Piyush Chaudhary, Sudha Saryu Malhotra, **Gosipatala Sunil Babu** and Ranbir Chander Sobti (2018). HGF promotes HTR-8/SVneo cell migration through activation of MAPK/PKA signaling leading to up-regulation of WNT ligands and integrins that target β -catenin. **Mol. Cell. Bioche.**(<https://doi.org/10.1007/s11010-018-3428-3>)(I.F.2.561).
3. Palepu Teja Ravinder, Vidya Sagar Choppella, anil Kumar Mokshagundam, M Kiruba, **Sunil G Babu**, Korupolu Raghu Babu, L John Berchmans and Gosipathala Sreedhar (2018). Enhanced visible –light-driven photocatalysis of Bi₂YO₄Cl heterostructures functionalized by bimetallic RhNi nanoparticles. **Frontiers of Materials Science** (12).405-414 (IF. 1.478)
4. Amit Rai, Umesh Kumar, Vinit Raj, Ashok K Singh, Pranesh Kumar, Amit K Keshari, Dinesh Kumar, Biswanath Maity, Arnab De, Amalesh Samanta, Sneha Nath, Anand Prakash, **Sunil Babu Gosipatala**,

- Gyan Chand, Sudipta Saha (2018). Novel 1,4-benzothiazines obliterate COX-2 mediated JAK-2/STAT-3 signals with potential regulation of oxidative and metabolic stress during colorectal cancer. **Pharmacol Res.** 129. (I.F. 3.450)
5. **Sunil G Babu**, Abhishek Pandeya, Neelam Verma, Nikita Shukla, R. Venkatesh Kumar, Sangeeta saxena (2014). Role of HCMV miR-UL70-3p and miR-UL148D in overcoming the cellular apoptosis. **Mol Cell Biochem** 1-10. (I.F:2.561)
 6. Gosipathala Sreedhar, A. Sivanantham, T. Baskaran, R. Rajapandian, S. Vengatesan, L. John Berchmans, **Sunil G. Babu** (2014). A Role of Lithiated sarcosine TFSI on the formation of single crystalline SrTiO₃ nanocubes via hydrothermal method. **Materials Letters**, (I.F: 2.687)
 7. Ashish Srivastava, **Sunil G. Babu**, Ashwani Kumar (2014). Presence of multiple forms of haloalkane dehalogenase Lin B in the metagenome of Hexachlorocyclohexane contaminated soils. *Octa Journal of Environmental Research*. **Oct J. Biosci** 2(1): 53-58(I.F:0.654).
 8. Ashish Srivastava, **Sunil G. Babu**, Ashwani Kumar (2014). Relative Bioavailability of α - and β -Hexachlorocyclohexane in various soils from a contaminated site. **Octa Journal of Environmental Research** 2(2):101-106 (I.F: 0.654).
 9. Sangeeta Saxena, Ashish Kumar and **Sunil G. Babu** (2014). Plant miRNAs: Key players in interkingdom and intra- Kingdom gene regulation. **International Journal Of Pharma and Bio Sciences** 5(2): (B)374-389. (I.F: 0.01)
 10. Sivanantham, K. Firoz Babu, M. Anbu Kulandainathan, **Sunil G. Babu**, R. H. Suresh Bapu and Gosipathala Sreedhar (2014). Capping and catalytic behaviour of lithiated sarcosine TFSI on the formation of hexagonal ZnO micro rods using hydrothermal method. **Materials Letters**, Vol.128,195-198. (I.F: 2.687)
 11. M. Kumar, R. Kumar, A.K. Srivastava, V. L. Nag, A. K. Maurya, **Sunil G. Babu** (2014): The efficacy of diagnostic battery in Pott's disease. **Indian Journal of Orthopedics**. 48(1),60 (I.F: 0.647)
 12. M. Kumar, R. Kumar, A.K. Srivastava, V. L. Nag, A. K. Maurya, **Sunil G. Babu** (2013): Sensitivity of PCR in relation to culture and staining in Pott's disease. **Indian Journal of Neurosurgery**. 1(2);46-51.
 13. Manoj Kumar, Raj Kumar, A.K. Srivastava, V.L. Nag, N. Krishnani, A.K. Maurya, T.N. Dhole and **Sunil G Babu** (2013): Clinical utility of interferon- γ releases assay (IGRAs) in Pott's disease; **International Journal of Bioassays**. 2(4):655-660 (IF: 0.548)
 14. Manoj Kumar, Gyan Chand, V.L. Nag, AK Maurya, R.N. Rao, Shudhi Singh, **Sunil G. Babu** (2012). A case series of breast tuberculosis in immunocompetent patients at tertiary care centre. **J Res Med Sci**; 17(2): 199-202. (I.F: 0.652)
 15. Rizwan Hussain, Hena Naqvi , Pradyumn Singh, **Sunil G Babu**, Mahdi Farzana (2012). A Study of c-kit activating mutations in acute myeloid leukemia M0 subtype in North India. **Egyptian J of Medical Human Genetics**: 13(2):133-138. (I.F: 0.53)
 16. Syed Rizwan Hussain, Faisal Ahmed, Hena Naqvi, Mahdi Farzana, Pradyumn Singh, **Sunil G Babu** (2012). KIT Proto-oncogene Exon 8 deletions at codon 419 are highly frequent in acute myeloid leukaemia with Inv (16) in Indian population. **Molecular Biotechnology**. 54(2)461-468. (I.F. 1.876).
 17. Hussain SR, **Babu S G**, Raja ST, Singh P, F Ahmed, Naqvi H, Mahdi F (2012). Screening of the c-kit gene missense mutation in Invasive ductal carcinoma of breast among north Indian population. **Molecular Biology Reports**: 39(9) 9139-9144. (I.F. 2.024)
 18. R. Venkatesh Kumar, **G Sunil Babu**, Seema Chauhan, Amit Srivastava, Yashwant Rao and Dhiraj Kumar (2012). Total phenolics and flavonoids content in ripened and unripened fruits of different mulberry (*Morus alba*) varieties. **Indian Journal of Agricultural Sciences** 82 (3); 277-279. (I.F: 0.177)

19. Hussain SR, ST Raza, H Naqvi, F Ahmed, **Babu S G**, A Kumar, Z Zadi, Singh P, Mahdi F(2012). Methylenetetrahydrofolate reductase C677T genetic polymorphisms and risk of leukemia among the North Indian Population. **Cancer Epidemiology**: 36(4); e227-e231. (I.F. 2.711).
20. Hussain SR, Raja ST, **Babu S G**, Singh P, Naqvi H, Mahdi F.(2012) Screening of c-Kit gene mutation in Acute Myeloid Leukemia in Northern India. **Iranian Journal of Cancer Prevention** 5(1) 27-32. (I.F. 0.2)
21. Syed Rizwan Hussain, **Sunil G Babu**, Hena Naqvi, Pradyumn Singh, Mahdi Farzana (2012). Detection of c-kit gene mutation in exon 11 of Leukemias. **Turkish Journal of Hematology**. 29(1)10-16. (I.F.0.360).
22. Syed Rizwan Hussain, Hena Naqvi, Faisal Ahmed, **Sunil G Babu**, Cherry Bansal and Mahdi Farzana (2012). Identification of the c-Kit gene mutations in biopsy tissues of mammary gland carcinoma. **Journal of the Egyptian National Cancer Institute**. 24(2):97-103. (I.F.0.86)
23. **Sunil G. Babu**, Sangeeta Saxena, Sanket Singh Ponia and Dinesh Kumar (2011) “Cellular OncomiR Orthologue in EBV Oncogenesis”. **J. Computers in Biology and Medicine** (41): 891-898. (I.F.1.240).
24. Sangeeta Saxena, Nidhi Singh, S. A. Ranade and **Sunil G. Babu** (2011). “Strategy for a generic resistance to Gemini viruses infecting tomato and papaya through *in silico* siRNA search”. **Virus Genes**: 43: 409-434. (I.F.1.576)
25. Y Vasudeva Rao and **G Sunil Babu** (2009) Enhancement of Disease resistance by indigenous plants. Assam University Journal of Science and Technology. 4(1) 40-45.
26. Syed Hussain Rizwan, Faisal Ahmed, Hena Naqvi, Pradyumn Singh, Farzana Mahdi and **Sunil G Babu** (2009). “C-kit proto-oncogene deletion and point mutation at exon 8, 17 in human acute myeloidLeukemia”. **Turkish Journal of Cancer** 39 (3); 095-103. (I.F.0.14)
27. Rao Y Vasudeva, G.R Duddukuri, Sunil G Babu and Rao R Athota (2002): Immunomodulatory activity of *Achyranthes aspera* on the elicitation of antigen specific murine antibody response. *Pharm Biol*: 40: 175-178. (I.F.1.241)

Books and Chapters in Book published:

1. A Chapter entitled “Strategy for Generic Resistance Against Begomoviruses Through RNAi” by Nikita Shukla, Saurabh Verma, **G Sunil Babu**, Sangeeta Saxena in the book *Begomoviruses: Occurance and Management in Asia and Africa* by Springer Nature, Germany, (2017)
2. A chapter entitled “ELISA based identification and detection of microbes” by Jyoti Verma, Sangeeta Saxena and **Sunil G Babu** in the book *Analyzing Microbes* by Springer Verlag- GmbH, Germany for ‘Springer Protocols Handbooks Series’ (2013)
3. An interdisciplinary approach to Forensic science (2005). Edited by Praveen K Janjua, Navjot K Kanwal and **G. Sunil Babu**. Selective and Scientific Books., New Delhi.

Undergone Training/ Workshop:

1. Attended QIP short term course on “Advances in Bioprocess Engineering ABE-2017’ organized by School of Biochemical engineering, IIT, BHU, Varanasi during 19th – 24th June 2017
2. Attended *Refresher Course (Summer School)* in Biotechnology in the Academic Staff College, University of Lucknow, Lucknow, Uttar Pradesh and obtained “A” grade in 8th June, 2016 to 29th June, 2016.
3. Attended “*Workshop on Fundamentals of Animal Cell Cultures*” by Institute of Bioinformatics, Bangalore in 04- 06 April, 2016.

4. Attended a workshop on “*Current Regulatory requirements for Members of Institutional Ethics Committee*” organized at BBD university, Lucknow in association with Clinical Development Services Agency and Department of Biotechnology, Ministry of Science and Technology, Govt of India during 15th and 16th September, 2015.
5. Attended 14th Indo-US cytometry workshop on “*Advanced Flow Cytometry Technique*” by Institute of Life Sciences, Bhubaneswar and Department of Pathology, Miller School of Medicine, University of Miami, USA from 22nd October to 26th October, 2013.
6. Attended Refresher Course (RC-214) in Biotechnology in the Academic Staff College, Himachal Pradesh University, Shimla and obtained “A” grade in 8th Nov- 8th Dec 2009.
7. Attended a **Bioinformatics Training Programme** (for Senior Scientists & Technologists working with Government of India) sponsored by DST and Ministry of Science and Technology) by CCMB, Hyderabad in 9th to 15th Feb 2009.
8. Attended CSIR sponsored CIMAP’s Winter School (CWS 2008) on “*Recent techniques in structural and functional Genomics*” 3rd to 12th Dec 2008, Lucknow.
9. Attended *53rd Orientation Programme* in the Academic Staff College and obtained “A+” grade; University of Hyderabad in 14th July 2006 to 14th August 2006.
10. Attended International workshop on Flow cytometry, Nov-7, 1998. All India Institute of Medical Sciences, New Delhi.

Workshop/ Conference Organized:

1. Organized International Pharmaceutical conference -2015 on “Nano formulations and Translational Research: Small getting bigger” as a Treasurer during Feb 02-03, 2015, Organized by Department of Pharmaceutical sciences, BBAU, Lucknow.
2. Organized 15th Indo-US Flow Cytometry Workshop on ‘*Applications of Flow Cytometry in Biomedical Research*’ during October 29-31, 2014, as Organizing Secretary at BBAU, Lucknow.
3. Organized a conference Lucknow Science Congress- 2014 (LUSCON-2014) as a Joint Secretary in Babasaheb Bhimrao Ambedkar University, Lucknow in 27th and 28th March, 2014.
4. Organized workshop on Patents & Intellectual Property rights on the topic “*Placement and Employment Prospects in Indian Patent offices and Hands on Training for Patenting the research work*” as Convener on 18th March 2013 at BBAU, Lucknow.
5. Organized a symposium *FLOWer* by BD Biosciences in the Department of Biotechnology during Feb 2013
6. Organized Hands on training on FACS cell analyzer by BD Biosciences exclusively for Research Scholars in May 2013 in the Department of Biotechnology, Babasaheb Bhimrao Ambedkar University, Lucknow.
7. Organized an “International Conference on Recent Advances in Biomedical Sciences” (ICRABTS-2005) as a Joint Secretary in Bundelkhand University, Jhansi during 6th to 8th January, 2004.
8. Organized an “International Conference on Recent Advances in Biomedical Sciences” (ICRABTS-2004) as a Joint Secretary in Bundelkhand University, Jhansi during 13th to 15th January, 2004.

International Conference attended/ Participated:

1. Attended 58th Annual Conference of Association of Microbiologist of India (AMI, 2017) and International Symposium on Microbes for Sustainable Development: Scopes & Applications (MSDSA-2017) organized

by Department of Environmental Microbiologist, Babasaheb Bhimrao Ambedkar University, Lucknow and give an invited talk on topic entitled “HCMV miRNA interplay on Human antiviral mechanisms” during 16th to 19th November, 2017.

2. Attended International Conference on Updates in Cancer Prevention & Research (ICUCPR-2017), organized by BBAU, Lucknow and give oral talk on the topic “Role of Viral miRNAs in the Carcinogenesis of Human tumor.” 14th to 16th February, 2017.
3. Attended International Conference of Zoological Society of India, 2015 during 28th Oct, 2015 to 30th Oct, 2015 organized in Babasaheb Bhimrao Ambedkar University, Lucknow.
4. Attended International Pharmaceutical conference -2015 on “Nano formulations and Translational Research: Small getting bigger” during Feb 02-03, 2015, Organized by Department of Pharmaceutical sciences, BBAU.
5. Attended Indo US symposium on “Contemporary issues in Cell kinetics” organized by BBAU, 29-30th October 2014 at BBAU, Lucknow.
6. Attended Second Annual Conference of the Indian Academy of Biomedical Sciences (IABS) & International symposium on Animal models of Human Diseases, on 29th Jan, 2013 at King George’s Medical University, Lucknow.
7. Attended “14th International Congress of Immunology, held at Kobe, Japan during 22nd to 27th Aug 2010.
8. Attended 1st International “Nobel Science Conclave” in India organized by Indian Institute of Information technology, Allahabad, Uttar Pradesh in 15th to 21st December, 2008.
9. Attended on EMBO workshop on Human Evolution and Disease organized by CCMB, Hyderabad during 6th to 9th December, 2006.
10. International conference on Modern trends in Forensic Science organized by Bundelkhand University, Jhansi, India during 13th to 15th Feb, 2005.
11. International conference on Recent Advances in Biomedical and Therapeutic sciences (2005); Bundelkhand University, Jhansi, India.
12. International conference on Chemistry Biology Interface: Synergistic New Frontiers from 21st Nov to 26th Nov, 2004 at New Delhi, India.
13. International conference on Recent Advances in Biomedical and Therapeutic sciences (2004); Bundelkhand University, Jhansi, India
14. Attended 10th International congress of Immunology New Delhi, India from 1st to 6th November, 1998.

National Conferences attended/Participated:

1. Attended Central zone ACBICON-2018 & National conference on Recent advancements Molecular Diagnostics” held at ERA University Lucknow during 21st-22nd July 2018 and delivered an invited talk on “Regulatory role of HCMV miRNAs on cellular apoptosis”.
2. Attended 1st North Indian Science Congress (NSIC-2018), organized by Babasaheb Bhimrao Ambedkar University, Lucknow and give invited talk on the topic “HCMV miRNA role on Human Antiviral Mechanism.” held on 10th -11th January, 2018.
3. Attended 44th National Conference of Association of Clinical Biochemists of India (ACBICON-2017), organized by Department of Biochemistry, King George Medical University, Lucknow and give invited talk on the topic “HCMV-miR-UL70-3p: its biological functions on Human Antiviral Mechanisms.” held on 3rd to 6th December, 2017.

4. Attended 4th LUSCON 2017 (Lucknow Science Congress) held during 3rd and 4th March, 2017, organized by Babasaheb Bhimrao Ambedkar University, Lucknow.
5. Attended 3rd LUSCON 2015 (Lucknow Science Congress) held during 30th Oct, 2015 to 2 Nov, 2015 in Babasaheb Bhimrao Ambedkar University, Lucknow.
6. Attended 39th Annual conference of Indian Immunology Society, organized by UGC Advanced Immunodiagnostic Training & Research Centre, at BHU, Varanasi and presented power point presentation on the topic “Does hcmv-miR-UL-22A-3p inhibits apoptosis during HCMV infections? - An silico study. 9th-11th November 2012.
7. Attended National Conference on Biotechnology for Sustainable Development, organized by Department of Biotechnology D.D.U. Gorakhpur University, Gorakhpur and presented power point presentation on the topic “Is HCMV miR-UL70-3p helps in hcmv to overcome the antiviral mechanism of humans?” 15th-16th November 2011.
8. Attended 80th Annual meeting of Society of Biological Chemists (India) organized by CIMAP, Lucknow and presented a poster entitled “Role of miR-UL-70-3p in overcoming the cellular autophagy of humans in hcmv infections”. 12th- 15th November 2011.
9. Attended National Conference on Cellular and Molecular Immunology, organized by Department of Biochemistry, Andhra University, Visakhapatnam, Andhra Pradesh, India during September 2010.
10. Attended 78th Annual meeting of Society of Biological Chemists (India) organized by NCCS and University of Pune and presented a poster entitled “Cellular OncomiR orthologue in EBV Oncogenesis”. 30th Oct to 1st Nov, 2009.
11. Attended the “Annual conference of Indian association of Pathologists & Microbiologists (IAPM)- U.P. Chapter organized by ERA’s Lucknow Medical college, Lucknow and presented a poster entitled “Mycobacterium tuberculosis secreted antigen (MTSA-10) and impaired cathepsins-L inhibit macrophage response”. Cot 24, 2009. UP and got awarded Best poster (Third position)
12. Attended 34th Indian Immunology Society conference organized by National AIDS Research Institute, Pune, 16-18th Dec, 2007.
13. Attended a one-day workshop on Right to information Act on 24th July, 2006 at University of Hyderabad, Hyderabad
14. Participated VI National conference of Indian Academy allergy (IAACON-2005) Visakhapatnam, India from 21st Jan to 23rd Jan, 2005.
15. National conference on Emerging areas in Biomedical Sciences. 28-30, Dec 2002, Bundelkhand University, Jhansi, India.
16. Participated in XXI Annual conference of Indian Immunology Society, Nov-7, 1998, AIIMS, New Delhi.

Invited Lectures at Seminars/ Conferences/ Workshops:

1. Delivered a invited talk on “**Regulatory role of HCMV miRNAs on Cellular apoptosis**” in Northern Zone ACBICON2018” organized by Dept. of Biochemistry, King George Medical University, Lucknow during 21&22nd July, 2018.
2. Delivered a talk on “**HCMV miR UL70-3p: its biological functions on Human antiviral mechanisms**” in 44th National Conference of Association of Clinical Biochemists of India on Emerging Trends in Clinical Biochemistry: From Evidence Based Medicine to Molecular Medicine organized by Association of Clinical Biochemists of India and Department of Biochemistry, King George Medical University, Lucknow during 3rd and 6th November, 2017.

3. Delivered a talk on **“HCMV miRNAs interplay on Human Antiviral mechanisms”** in International Symposium on Microbial for Sustainable development: Scope and Application (MSADSA- 2017) organized by Association of Microbiologist in India and Department of Environmental Microbiology, BBAU, Lucknow during 16th and 19th November, 2017.
4. Delivered a talk on **“Viral miRNAs: An Insight”** in *National Conference on Advances in Plant Science Frontier: Development and Environment* organized by Department of Botany, Gandhi Faiz-e-Aam College, Shahjahanpur during 26th and 27th November, 2016.
5. Delivered a talk and conducted a session FPLC in the Hand’s on Training on SEM, FTIR, FPLC and Ion exchange chromatography” organized by USIC, BBAU during 18-20th Feb 2015.
6. Delivered a talk on the **“Role of miRNA based Nano formulations in countering the latent infections of Human Cytomegalovirus?”** in the International Conference Pharmaceutical Conference-2015 held on 2nd and 3rd Feb, 2015, organized by Department of Pharmacy and BBAU, Lucknow.
7. Delivered invited talks on
 - a. “Transplantation Immunology”
 - b. “Different techniques in Immunology”
 in Advance Immunology Course organized by Department of Biochemistry, King George’s Medical University, Lucknow, U.P. 22 & 23 Feb 2013.
8. Delivered an invited talk on **“Role of miR BART-5 in EBV induced Carcinogenesis”** in the National Conference on Cellular and Molecular Immunology, organized by Department of Biochemistry, Andhra University, Visakhapatnam, Andhra Pradesh, India during 25th and 26th September 2010.
9. Deliver a talk on **“Role of immunoassays in Forensic investigations”**. International conference on Modern trends in Forensic Science. Bundelkhand University, Jhansi during 13th to 15 Feb, 2005.
10. Sunil G Babu, Rambir Singh and Rao R Athota **“Anti-allergic properties of the flavonoids isolated from the bark of *Avicennia officinalis*”**. 6th National conference on Indian Academy of Allergy. Visakhapatnam on 21st to 23rd January, 2005 Awarded Best Oral presentation (Gold medal) on free papers category.
11. Sunil G Babu and Rao R Athota (2005): **Immunomodulatory activities of flavonoids isolated from the bark of *Avicennia officinalis***. 2nd International conference on recent advances in Biomedical and Therapeutic Sciences. Bundelkhand University, Jhansi.
12. Deliver a talk on **“Knockout mice and their role in Immunology”**. A seminar in recent Advances in Biochemical techniques. Dept. of Biochemistry, Bundelkhand University, Jhansi.
13. Deliver a talk on **“Allergy- An Immunological perspective”**. Science day on 28th Mar, 2003. Bundelkhand University, Jhansi.
14. Deliver a talk on **“Immunotoxins- the magic bullets”**. National conference on emerging areas in Biomedical Sciences, 28-30 Dec, 2002 at Bundelkhand University, Jhansi, Uttar Pradesh.

Poster Presentations:

1. Alok Kumar, **G Sunil Babu** (2017), got IInd Prize in Poster Presentation on topic entitled **“WNT antagonist SFRP1 in gene promotor hypermethylation as a prognostic marker for Colorectal**

Cancer” in *International Conference on Updates on Cancer Prevention and Research (ICUCPR-2017)* organized by BBAU, Lucknow during 14th Feb, 2017 to 16 Feb, 2017.

2. Abhishek Pandeya, **G Sunil Babu**, (2016) got Ist Prize in Poster Presentation on topic entitled **“Investigation(s) on the role of HCMV miRNAs on cellular death pathways”** in *National Conference on Advances in Plant Science Frontier: Development and Environment* organized by Department of Botany, Gandhi Faiz-e-Aam College, Shahjahanpur during 26th and 27th November, 2016
3. Neelam Verma, Pradyumn Singh, **Sunil. G. Babu** (2015): **miRNA based Nano formulations and their role in countering the diffuse Large B- Cell Lymphoma**. International Pharmaceutical Conference-2015, BBAU, Lucknow.
4. Neelam Verma, Gyan Chand, Sangeeta Saxena, Sunil. G. Babu (2014): **“Papillary Thyroid Cancer- Report of a Novel Mutation”** in 2nd Lucknow Science Congress during March 27-28, 2014.
5. Gyan Chandra, Gyan Chand, Richa Kumari, Nikita Shukla, Priyanka Sonkar, Sangeeta Saxena, Sunil G. Babu (2012): **Study of MTHFR polymorphism in folate deficient pregnancy cases**. 39th Annual Conference of Indian Immunology Society, BHU Varanasi during 9-11th November 2012.
6. Syed Rizwan Hussain, Sunil G. Babu, M. Kaleem Ahmad, Farzana Mahdi, Abbas AliMahdi (2012): **KIT Proto-oncogene exon 8 deletions at codon 419 are highly frequent in acute myeloid leukemia with inv(16) in Indian Population**. 39th Annual Conference of Indian Immunology Society, BHU Varanasi during 9-11th November 2012.
7. Vijay Kumar Singh, Raj Kumar, Jyoti Verma, Gyan Chandra, Sangeeta Saxena, Sunil G. Babu (2012): **Role of exon 12 polymorphisms of Aggrecan gene in the in vertebral disc degeneration**. 39th Annual Conference of Indian Immunology Society, BHU Varanasi during 9-11th November 2012.
8. Neelam Verma, Gyan Chand, Vijay Kumar Singh, Gyan Chandra, Sangeeta Saxena and Sunil G. Babu (2012): **MTHFR Polymorphisms –its implications in the susceptibility of breast cancer**. 39th Annual Conference of Indian Immunology Society, BHU Varanasi during 9-11th November 2012.
9. Sunil G Babu and Sangeeta Saxena (2011): **Role of miR-UL-70-3p in overcoming the cellular autophagy of human in hcmv infections**. 80th Annual meeting of the Society of Biological Chemists (India) Organized by CMAP, Lucknow during 12-15th November 2011.
10. Sangeeta Saxena and Sunil G Babu (2011): **In- silico designing Role of miR-UL-70-3p in overcoming the cellular autophagy of human in hcmv infections**. 80th Annual meeting of the Society of Biological Chemists (India) Organized by CMAP, Lucknow during 12-15th November 2011.
11. Sunil G Babu and Sangeeta Saxena (2010): **Cellular Oncomir Orthologue in EBV oncogenesis”**. 14th International Congress of Immunology, Kobe, Japan.
12. Sangeeta Saxena and Sunil G Babu (2010): **Does miR-BART-5, play a role in epigenetic changes associated with Colorectal carcinoma?** 14th International Congress of Immunology, Kobe, Japan.
13. Sunil B Gosipatala, Pradeep k Kamal and Rao R Athota (2007): **Do the immunosuppressive principles isolated from the bark of *Avicennia officinalis* exhibit antiartheritic activity?** 34th Indian Immunological Society Conference. Pune.
14. A. Radhamani, Ritesh Kumar, Rambir Singh and Sunil G Babu (2005): **Hypersensitivity reactions to Sulfa drugs**. 6th National conference on Indian Academy of Allergy. Visakhapatnam.
15. Ruchi Tiwari and Sunil G Babu (2005): **Occupational Contact Dermatitis by Cement dust**. 6th National conference on Indian Academy of Allergy. Visakhapatnam.

16. A. Radhamani, Rambir Singh and Sunil G Babu (2005): **Is drug hypersensitivity reactions are more genetical in female**. 2nd International conference on recent advances in Biomedical and Therapeutic Sciences. Bundelkhand University, Jhansi.
17. Sunil G Babu, Prasanna S Kumar, Veerendra B Kumar, Aparanji, Raghava T Rao and Rao R Athota (2004): **Immunosuppressive activity of *Avicennia officinalis* Linn. On allergen specific, humoral response in murine system**". International conference on recent advances in Biomedical and Therapeutic Sciences. Bundelkhand University, Jhansi.
18. T. Raghava Rao, G. Sunil Babu and Rao R Athota (2004): **Studies on the allogenic and T cell proliferative activity of *Vigna sinensis* allergens**. International conference on recent advances in Biomedical and Therapeutic Sciences. Bundelkhand University, Jhansi.
19. Y.V. Rao, D.G Rao, G. Sunil Babu and Rao R Athota (2000): "Enhancement of **Ovalbumin-specific antibody response by the extract of *Achyranthes aspera***". 66th Annual Conference of the association of Clinial Biochemists of India.
20. D.Govinda Rao, N.S. Mandadi, B.V.Kumar, G. Sunil Babu Y.V. Rao and Rao R Athota (1999): **Effect of Honey on induction of murine humoral immunity**. 10th International Congress of Immunology, New Delhi.
21. D.Govinda Rao, B.V. Kumar, S. P. Kumar, G. Sunil Babu and Rao R Athota: **Immunosuppressive effect of honey on elicitation of humoral antibody response in mice**. Annual Conference of Indian Immunology Society, Visakhapatnam.
22. B.V.Kumar, A. Srinivasulu, D.G. Rao G. Sunil Babu, P. Aparanji and Rao R Athota: **Immunomodulatory property of leaf extract of *Hibiscus rosasinensis* in mice**. 66th SBC(I) Visakhapatnam.

Achievements of the students supervised by me:

1. Got Second Prize in Poster Presentation on the topic entitled "*WNT* antagonist *SFRP1* in gene promotor hypermethylation as a prognostic marker for Colorectal Cancer" by Alok Kumar*, Pradyumn Singh, **Sunil G Babu** in International Conference on Updates on Cancer Prevention and Research (ICUCPR-2017) organized by BBAU, Lucknow during 14th Feb, 2017 to 16th Feb, 2017.
2. Got First Prize in poster presentation on the topic entitled "*Investigation(s) on the role of HCMV miRNAs on cellular death pathways*" by Abhishek Pandeya*, **G Sunil Babu** in National Conference on Advances in Plant Science Frontier: Development and Environment organized by Department of Botany, Gandhi Faiz-e-Aam College, Shahjahanpur during 26th and 27th November, 2016
3. Got Silver medal in Poster Presentation on the topic entitled "*Comparative study of Dyslexia by using Neuroimaging Techniques*" by Rajat Raj Rastogi*, Vijay Kumar Singh, Ashish Kumar, Shah Zafar, Nidhi Gautam and **Sunil G. Babu** in National Conference on Cellular and Molecular Immunology, organized by Department of Biochemistry, Andhra University, Visakhapatnam, Andhra Pradesh, India during 25th and 26th September 2010.

Ph.D Supervised: (Completed: 03; Ongoing: 03)

Completed:

1. **Manoj Kumar, (2013)**, “*Early detection of Extra pulmonary tuberculosis infection in the neurosurgical samples of Human.*” with joint Supervision of **Prof. Raj Kumar**, Sanjay Gandhi Post Graduate Institute, Lucknow.
2. **Syed Rizwan Husain, (2013)**, “*Role of c-kit gene mutation in Neoplasia of Human.*” with joint supervision of **Dr. Farzana Mehdi**, King George Medical College- Lucknow.
3. **Ashish Kumar Srivastava (2015)**, “*Characterization of genes from a soil metagenome for improved biodegradation of the chlorinated insecticide Hexachlorocyclohexane.*”

Ongoing:

1. **Piyush Chaudhary, (from 2013)**, “*Role of HGF and WNT signaling pathways in trophoblastic cell migration under normal and hypoxic condition.*” with joint supervision of **Prof. S.K. Gupta**, Indian Institute of Immunology, New Delhi along with **Prof. R.C. Sobti**, Vice Chancellor, BBAU, Lucknow.
2. **Alok Kumar, (Form 2013)**, “*A study of newer prognostic epigenetics markers STRP-1 and IGF- β P3 in Colorectal cancer.*” with joint supervision of **Dr. Pradyumn Singh**, Additional Professor, RMLIMS, Lucknow.
3. **Abhishek Pandeya (Form 2015)**, “*Identification(s) of on HCMV miRNA’s role among the cellular death pathways.*” with joint supervision of **Dr. Sanjay Yadav**, Scientist C, CSIR- IITR, Lucknow.

Dissertation Supervised:

1. A. Radhamani (2005), “**A Comparative Study in Humans Showing Hypersensitivity towards Various Drugs.**” in Department of Biomedical Sciences, Bundelkhand University, Jhansi, Uttar Pradesh.
2. Sasmita Dehury (2006), “**Antimicrobial Studies of Terminalia arjuna LINN.**” P.G Dept. of Bioscience., College of Pharma. Sci., Berhampur University, Orissa.
3. Nitin Kumar Saun (2007), “**To evaluate Reproductive Endocrine Functions in humans Using Radio Immuno Assay**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
4. Jitendra Kumar Kanaujiya (2007), “**Selectin-E Gene Polymorphism in Coronary Artery Disease**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
5. Sushil Kumar (2007), “**Post Harvesting Challenges in Piper belte L. SGM1 and Molecular characterization of Different landraces**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
6. Neeraj Kumar (2008), “**Multiplication of Pseudomonas as Biofertilizers & Bio-Control in large scale**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
7. Dinesh Kumar (2008), “**Evaluation of primary Hyper parathyroidism and bone health disease**”. from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
8. Saurabh Kumar (2008), “**Immune Response in Visceral Leishmaniasis**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
9. Ashkish Chandra (2008), “**Multiplication of Azotobacter as Biofertilizers in Large Scale**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
10. Shailendra Kumar (2008), “**Multiplication of bacillus as Biofertilizers & Bio-Control in large Scale**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
11. Shailendra Kumar Verma (2008) “**The Study of dioecious medicinal plant Tinospora cordifolia**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.

12. Tripti Srivastava (2009), “**Isolation of cross reactive molecules of filarial and *leishmania* parasites and their responses in rodent hosts**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
13. Pratibha Singh (2009), “**Biotransformation of Benzaldehyde into L-PAC by yeast strains**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
14. Kavita Singh (2009), “**Role of Cytochrome P450 2C19*2 and 2C19*3 single nucleotide polymorphisms in drug resistant epilepsy**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
15. Richa Verma (2009), “**Antigenic Analysis of Filarial Parasites**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
16. Sanjay (2010), “**Cell proliferation analysis in rat kidney tissue at embryonic day 18 using immunohistochemistry**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
17. Urvarshi Singh (2010), “**Maintenance, propagation and Cryopreservation of mammalian Cell lines**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
18. Atul (2010), “**Immunomodulatory effect of Zinc Oxide Nanoparticles on Macrophages-An *In vitro* Study**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
19. Kripa Shankar (2010), “**Immunotoxic Effects of *Argemone* Oil: An *in vitro* Study**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
20. Abhishek Pandeya (2011), “**In silico search for the putative miRNA orthologs between *human* and *human cytomegalovirus***” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
21. Brijendra Singh (2011), “**The alterations in exon 7 of PTEN gene leads to endometrial cancer among north Indian women**”. from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
22. Dinesh Kumar Verma (2011), “**Study of polymorphism in PDGF-B genes in acute myeloid leukemia in north Indian population**”. from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
23. Kiran Vati (2011), “**Role of Mutations in exon-4 of runx1 gene in Acute myeloid leukemic patients**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
24. Rekha Devi (2011), “**In silico search for the miRNAs which are binding other than the UTR regions of mRNAs between humans and cytomegalovirus**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
25. Raghunath Pratap Singh (2011), “**Analysis of PDGF-B Gene Exon Polymorphism In Acute Leukemia In North Indian Populations.**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
26. Vijay Kumar Singh (2011), “**Matrix metalloproteinase-1 gene polymorphism in vertebral Disc Degeneration Disease in North Indian Populations**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
27. Ashok Priyadarshi (2012), “**Platelet-Derived Growth Factor and Its Receptor in Cancer and its role in therapeutics**”. from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
28. Praveen Kumar (2011), “**Study of polymorphisms in the MTHFR genes in the pregnancy in North Indian Population**”. from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh
29. Rohit Kumar (2012), “**Study of MTHFR Gene Polymorphism in Breast Cancer in North Indian population**” from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.

30. Nikita Shukla (2013), "***In silico* search for putative miRNAs orthologs between human and human cytomegalovirus: their role in overcoming cellular Apoptosis**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
31. Priyanka Sonkar (2013), "***In silico* search for putative miRNAs orthologs between human and human cytomegalovirus: their role in overcoming cellular Apoptosis**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
32. Raghvendra (2014), "**Role of K-Ras gene in colorectal Cancer.**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
33. Anshu (2014), "**Detection of BRAF(V600E) Mutation in Exon 15 of BRAF Gene in Papillary Thyroid Cancer by Tetra-Arms PCR**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
34. Neetika Saxena (2014). "**Detection of BRAF V600E mutation in papillary thyroid carcinoma by restriction fragment length polymorphism (RFLP)**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
35. Rajesh Babu Nandipam (2014), "**A Review of BRAF Gene: Marker for Papillary Thyroid Cancer**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
36. Shweta Dixit (2015), "**Role of EBV miR-BART-15 and miR-BART10-5p in overcoming the Cellular apoptosis**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
37. Afrin Jahan (2016), "**Multiplex PCR as the Diagnostic Tool for the Identification of Tumor Progression**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
38. Akhilesh Kumar (2016), "**Malaria Resistant Gene in Tharu People**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
39. Deepali Maurya (2016), "**In Silico Search for role of Human Herpes virus 6B virus (hhv6b) miRNAs on cellular Apoptosis**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
40. Sneha Sachan (2016), "**PCR use as a diagnostic tool for identification of beta thalassemia in north India population**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
41. Tarun Kumar (2016), "**Role of Glucose 6 Phosphate Dehydrogenase in Malaria resistance among Tharu People.**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
42. Vijay Laxmi (2016), "**A Review: Host (Human)-Pathogen Interactions at miRNA Level**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
43. Arshad Husain (2017), "**Strategies to control the mosquitoes thereby controlling the mosquito borne diseases**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
44. Arti Priyadarshini (2017), "**Role of MOAP-1 and its interaction with various miRNAs**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
45. Ashish Kumar (2017), "**Investigations on the role of Endoplasmic Reticulum Nuclei**". from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
46. Roshni Singh (2017), "**Human Cytomegalovirus miRNA hcmv-miR-UL-70-3p orthologous with different virus & human microRNA**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
47. Satyawani (2017), "**Does HCMV miRNAs target Necrosis?**" from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.

48. Vikas Kumar (2017). **“Investigation of HCMV miRNAs in regulation of Autophagy”** from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.
49. Vandana Verma (2017), **“Human Cytomegalovirus miRNA hcmv-miR-148D orthologous with different virus & human microRNA”** from Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh.

Memberships:

1. Life member, Indian Immunology Society.
2. Life member, The Society of Biological Chemists (SBC) India.
3. Life member, The Cytometry Society -India.
4. Life member, Association for the Promotion of DNA Fingerprinting and other DNA Technologies (ADNAT).
5. Member-International Society for Advancement of Cytometry (ISAC -2015)

Date:

Place:

(Sunil Babu Gosipatala)