

Shubhada V. Chiplunkar

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Designation : Director
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Educational Qualifications:

Degree	Subject	University	Year
Post-doctoral Fellow		Max-Planck Institute for Immunology Freiburg, Germany.	1984-1986
Ph.D.	Applied Biology	Mumbai	1983
M.Sc.	Applied Biology	Mumbai	1979
B.Sc.	Microbiology	Mumbai	1974

Publications: 98

Research Interests:

Tumor Immunology

1. Immunology of $\gamma\delta$ T lymphocytes: Activation and death of $\gamma\delta$ T cells in patients with oral/esophageal cancer.
2. Understanding T cell signaling defects and immune dysfunctions in oral cancer patients.
3. Understanding the cross talk between bisphosphonate-stimulated tumor cells/ $\gamma\delta$ T cells and osteoclasts.
4. Role of Notch signaling in regulation of $\gamma\delta$ T cells and regulatory T cells.
5. Role of Toll like receptors in anti-tumor immunity mediated by $\gamma\delta$ T cells.
6. Antibody dependent cellular cytotoxicity mediated $\gamma\delta$ T cells.
7. Tumor microenvironment and immune dysfunctions: Role of myeloid derived suppressor cells
8. Genomic and functional studies in T-ALL patients.
9. Use of plant derived alkylamines in stimulating anti-tumor potential of $\gamma\delta$ T cells.
10. Characterization of bioactive compounds that regulate osteoclastogenesis.
11. Cross talk of mesenchymal and immune cells
12. Understanding the role of Th17 and regulatory T cells in gall bladder cancer.

Recognised as M.Sc./Ph.D Teacher

1. Professor: Homi Bhabha National Institute (Deemed University), Mumbai: 2008 onwards.
2. Recognized Guide Homi Bhabha National Institute (Deemed University), Ph.D (Life Sciences), 2006 onwards.
3. Recognized Guide of University of Mumbai for guiding M.Sc. and Ph.D. students in Applied Biology
 - Ph.D Awarded – 14
 - Ph.D. Registered – 5
 - M.Sc. Awarded –1

Awards:

1. Recipient of Annual award from Society for cancer research and communication (SCRAC), 6th April **2013**
2. SENIOR SCIENTIST ORATION AWARD by Indian Immunology Society, **2007**.
3. Recipient of the ‘Outstanding Young Person Award-1994’ for outstanding contribution and achievements in Medical Sciences, from Marine Lines Junior Chamber, April **1994**.
4. Bursary Award for Young Scientist to participate in the 18th International Congress of Immunology, Budapest, Hungary, July-August **1992**.
5. Fellowship from Max Planck Institute for Immunobiology for postdoctoral training in the laboratory of Dr. S.H.E. Kaufmann, Freiburg, Germany, **1984-1986**.
6. EMBO training fellowship to participate in workshop on Basic Immunology, Pavia, Italy, September **1985**.

Nomination to National /Institutional Scientific Body

1. Member, Maharashtra Academy of Sciences
2. Member, Executive Committee, Moving Academy of Sciences
3. Life Member The Cytometry Society of India
4. Life Member Mumbai Immunology Group
5. Life member of Indian Immunology Society.
6. Life Member of Indian Association for Cancer Research
7. Life member of Bombay Haematology Society.
8. Life Member of Molecular Immunology Forum.

Appointed as Office Bearer of Scientific Society/Association

1. President, Indian Association for Cancer Research **2011-2014**
2. Secretary: Mumbai Immunology Group, **2010 onwards**.
3. Nominated Member: International Society for Advancement of Flow Cytometry: **2009**.
4. Elected Vice-President: Indian Association for Cancer Research Executive Committee **2006-2009**.
5. Jt. Secretary, The Cytometry Society **2007-2009**.
6. Vice President, Indian Immunology Society **2007-2009**.
7. Vice-President, Indian Association for Cancer Research **2006-2009**.
8. Executive Committee Member, Indian Immunology Society, **2004-2006**.
9. Secretary of Indian Association of Cancer Research **2000-2003**.
10. Secretary of Bombay Immunology Group.
11. Jt. Secretary Indian Immunology Society on two occasions, **1996-1997, 1999-2000**.
12. Executive committee member of the Indian Association for Cancer Research, **1997-1999**.

Appointed to National/International Funding Agency/Task Force Committee

1. Chairperson, Institutional Committee for Stem Cell Research, National Institute for Research in Reproductive Health, Mumbai, 2015.
2. Chairperson, Scientific Advisory Committee and Member, Research & Recognition Committee, MGM Institute of Health Sciences, Navi Mumbai
3. Member: Scientific Advisory Committee, ICMR Centre for Advanced Research in Cancer Genetics & Genomics.
4. DBT Nominee, IBSC of Indian Institute of Technology-Bombay (IIT-B), Mumbai **2015**
5. Member, Research Advisory Council (RAC), All India Institute of Medical Sciences, New Delhi **2015**
6. Member, BRIT Board, May 2014
7. Member, Expert Committee for selection of Ramalingaswami Re-entry Fellowship, Department of Biotechnology(DBT), May, **2014**
8. Member, Project Review Committee in the subject of Stem Cell Research and Therapy, TMC, Kolkata, **2014**.
9. Member, Scientific Advisory Committee at National Institute of Virology, Pune **2014**.
10. Member, Advisory council for Research of Haffkine Institute, Mumbai, **2014**.
11. Member, Research Advisory Council, All India Institute of Medical Sciences, New Delhi, **2014**.
12. Co-Chairperson, Steering Committee, ICMR Task Force on Translational Immunology ICMR, New Delhi, **2014**.
13. Member: Review Committee on Genetic Manipulation (RCGM), Department of Biotechnology, New Delhi
14. Member, Indian Council of Medical Research Project Review Committee (PRC) Meeting for Division of Non-communicable Diseases (Oncology), New Delhi.
15. Member: Scientific Advisory Committee, Indian Council Of Medical Research (ICMR), October 24-25, 2013
16. Member: Scientific Advisory Committee for the Centre for Molecular Medicine at AIIMS, New Delhi,
17. National Institute for Research in Reproduction Health-Institutional Committee on Stem Cell Research and Therapy (NIRRH-ICSCRT), National Institute for Research in Reproduction Health, Mumbai, **3 years 2011 onwards**
18. Member, Research & Recognition Committee, MGM Institute of Health Sciences, Navi Mumbai
19. Member: Scientific Advisory Committee, ICMR Centre for Advanced Research in Cancer Genetics & Genomics.
20. Member, Subcommittee on Control of Cervical Cancer (ICMR),
21. Invited Expert, DBT Cancer Biology Meeting,
22. Invited Member, Brain Storming meeting on Toxic Constituents of Smokeless Tobacco: ICMR, New Delhi
23. Member, Selection Committee, DBT Post Doctoral Fellowship, Indian Institute of Science, Bangalore

Membership of University/Board/Committee

1. Chairperson, Ad-hoc Board of Studies in Applied Biology, University of Mumbai, Mumbai **2015 – 2018**.

Ex-Officio member of following Authorities/Bodies of the University

- Member of the Academic Council
 - Member of the Faculty of Science
 - Member of the Board of University Teaching and Research for the Faculty of Science
2. Member of the Research and Recognition Committee for the Ad-hoc Board of Studies in Applied Biology. 2015-2018
 3. Member, Academic Council HBNI, **2012 onwards**
 4. Member, Board of Studies Health Sciences, HBNI
 5. Member, Academic Council, Board of Studies in Life Sciences, Homi Bhabha National Institute (Deemed University): **2010 onwards.**
 6. Member, HBNI Standing Committee **2007 onwards.**
 7. Member, HBNI: Recognition as Ph.D (Life Sciences) Teacher, Homi Bhabha National Institute (Deemed University), **2006 onwards.**
 8. Member, Research and Recognition Committee for Board of Studies in Biotechnology, Mumbai University, **2009-2010.**
 9. Chairperson, Ad-hoc Board of Studies in Applied Biology, University of Mumbai, Mumbai **2004 – 2008.**
 Ex-Officio member of following Authorities/Bodies of the University
 - Member of the Academic Council
 - Member of the Faculty of Science
 - Member of the Board of University Teaching and Research for the Faculty of Science
 10. Member of the Research and Recognition Committee for the Ad-hoc Board of Studies in Applied Biology.

Publications

1. Swati P. Phalke and **Shubhada V. Chiplunkar** (2015) Activation status of $\gamma\delta$ T cells dictates their effect on osteoclast generation and bone resorption. *Bone Report* (In Press).
2. Aparna D. Chaudhari, Rajiv P. Gude, Rajiv D. Kalraiya, **Shubhada V. Chiplunkar** (2015) Endogenous galectin-3 expression levels modulate immune responses in galectin-3 transgenic mice. *Molecular Immunology* pp 300-311, 2015
3. Rajiv Kalraiya, Shyam K More, Nithya Shrinivasan, Srikanth Budnar, Sanjay Bane, Archana Upadhyaya, Rahul Thorat, Arvind Ingle, **Shubhada Chiplunkar** (2015) N-glycans and metastasis in galectin-3 transgenic mice. *Biochemical and Biophysical Research Communications*: 460 , pp. 302-307 DOI Information: 10.1016/j.bbrc.2015.03.030
4. Rushikesh S. Patil, Sajad A. Bhat, Asif A. Dar, **Shubhada V. Chiplunkar** (2015). The Jekyll and Hyde story of Il17 producing $\gamma\delta$ T ($T\gamma\delta 17$) cells. *Front. Immunol.* **6**:37. doi: 10.3389/fimmu.2015.00037
5. Dar AA, Patil RS and **Chiplunkar SV** (2014) Insights into the relationship between toll like receptors and gamma delta T cell responses. *Front. Immunol.* **5**:366.doi:10.3389/fimmu.2014.00366.
6. Dimpu Gogai, Asif A. Dar, **Shubhada V.Chiplunkar** (2014).Involvement of Notch in Activation and Effector Functions of gamma delta T cells. *Journal of Immunology* ,**192**:2054-2062.
7. Babita Balakrishnan, **Shubhada V. Chiplunkar,**Madhavi Indap (2014): Methanol Extract of *Euchelus asper* prevents bone resorption in ovariectomised mice model. *Journal of Osteoporosis.* 2014;2014:348189. doi: 10.1155/2014/348189. Epub 2014 Jun 5.
8. Balakrishnan B¹, Indap MM, Singh SP, Krishna CM, **Chiplunkar SV** (2014). Turbo methanol extract inhibits bone resorption through regulation of T cell function. *Bone.* Jan;**58**:114-25. doi: 10.1016/j.bone.2013.10.008. Epub 2013 .
9. Nirmala Shanoj, Gautam Banerjee, Vilas P. Shinkar, **Shubhada V. Chiplunkar** (2013). Gamma delta T cell stimulatory activity of tea and Indian herb extracts. *International Journal of Tea Science*: Vol 9, Number 2-3, ISSN:0972-544X, pp 26-35.

10. Paleja B, Anand A, Chaukar D, D'cruz A, **Chiplunkar SV** (2013). Decreased functional response to toll like receptor ligands in patients with oral cancer. *Hum Immunol.* 74(8): 927-938..
11. Gogoi D, **Chiplunkar S V** (2013) Targeting gamma delta T cells for cancer immunotherapy: Bench to bedside. *Indian J Med Res.* 138: 755-761
12. Sinha RK, Bojjireddy N, Kulkarni D, Ratheesh A, **Chiplunkar SV**, Gude R, Subrahmanyam G (2013). Type II phosphatidylinositol 4-kinase β is an integral signaling component of early T cell activation mechanisms. *Biochimie.* 2013 Aug;95(8):1560-6. doi: 10.1016/j.biochi.2013.04.005. Epub 2013 Apr 23
13. Rakesh R. Somani, **Shubhada Chiplunkar**, Shamal P. Vetale, Dinesh T. Makhija Prabhakar Y. Shirodkar (2013) : Evaluation Of Apoptosis Inducing Activity Of An Oxadiazole Based Potential Anticancer Compound International Journal of PharmTech Research CODEN (USA): IJPRIF ISSN : 0974-4304 Vol.5, No.3, pp 1233-1240, July-Sept
14. Patel S, Vetale S, Teli P, Mistry R, **Chiplunkar S** (2011)_ IL-10 production in non-small cell lung carcinoma patients is regulated by ERK P38 and COX2. *J. Cell Mol. Med.* 2011 Apr 20 doi;10:1111/:1582-4934.
15. Dhar S, **Chiplunkar S** (2010) : Lysis of aminobisphosphonate sensitized MCF-7 breast tumor cells by V γ 9V δ 2 T cells. *Cancer Immunity* 2010 Nov Nov 12;10:10. [PMID: 21069948]
16. Shukla S, Bharti AC, Mahata S, Hussain S, Hedau S, Sharma R, Pillai MR, Krishna S, **Chiplunkar S**, Tengaonkar H, Das BC (2010): Application of a Multiplex PCR to cervical cells collected by a paper smear for the simultaneous detection of all mucosal human papillomaviruses and typing of HR HPV types 16 and 18", *J Med Microbiol* , Nov;59(Pt 11):1303-10. [PMID: 20688948]
17. Pillai R, Babu J, Jissa V, Lakshmi , **Chiplunkar S**, Patkar M, Tongaonkar H, Reddy K, Chakka K, Siddiqui M, Roychoudury S, Abraham P, Peedicayil A, Gnanamony M, Subashini J, Ram T, Dey B, Singh N, Singh A, Jain S, Jayshree RS (2010) : Region Wise Distribution Of High Risk HPV Types In Squamous Cell Carcinomas Of Cervix In India. *Int J Gynecol Cancer* , Aug;20(6):1046-51.[PMID: 20683415]
18. Pillai MR, Hariharan R, Babu JM, Lakshmi S, **Chiplunkar SV**, Patkar M, Tongaonkar H, Dinshaw K, Jayshree RS, Reddy BK, Siddiqui M, Roychoudury S, Saha B, Abraham P, Gnanamony M, Peedicayil A, Subhashini J, Ram TS, Dey B, Sharma C, Jain SK, Singh N. [2009] Molecular variants of HPV-16 associated with cervical cancer in Indian population. *Int J Cancer.* 125(1): 91-103.
19. **Chiplunkar S**, Dhar S, Wesch D, Kabelitz, D [2009] $\gamma\delta$ T cells in cancer immunotherapy: current status & future prospects. *Immunotherapy* 1(4): 663-678. PMID: 20635991.
20. Kulkarni D, Wadia P, Pradhan T, Pathak A and **Chiplunkar S** [2009] Mechanisms involved in the down-regulation of TCR ζ chain in tumor versus peripheral blood of oral cancer patients. *International Journal of Cancer*, 124, 1605-1613. [Figure accepted as cover page for 'International Journal of Cancer'].
21. Patel S, **Chiplunkar SV** [2009] Host immune responses to cervical cancer. *Current Opinion in Obstetrics and Gynecology* 21, 54-59.
22. **Chiplunkar S**. [2008] Immunobiology of Cancer Stem Cells. In:Cancer Stem Cells: Identification and Targets, Eds ; Sharmila Bapat, *John Wiley & Sons, Inc.* 233-242.
23. Kanjwani DG, Marathe TP, **Chiplunkar SV** and Sathaye SS [2008] Evaluation of Immunomodulatory Activity of Methanolic Extract of Piper betel. *Scandinavian Journal of Immunology*, 67, 589-593.
24. Wadia P, Rao D, Pradhan T, Pathak A and **Chiplunkar S** [2008] Impaired lymphocyte responses and their restoration in oral cancer patients expressing distinct TCR variable region. *Cancer Investigation*, 26:471-480.
25. **Chiplunkar S** I[2007] Immunology in India. *European Journal of Immunology, News and EFIS*, 37: 2675-2679.
26. Patel S and **Chiplunkar S** [2007] Role of cyclooxygenases-2 in tumor progression and Immune regulation in lung cancer". *Indian J Biochem & Biophysics*, Vol.44, 419-428.

27. Bhairavabhotla RK, Verma V, Tongaonkar H, Shastri S, Dinshaw K and **Chiplunkar S** [2007] Role of IL-10 in immune suppression in cervical cancer. *Indian J Biochem & Biophysics* Vol.44, 350-356.
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29. Kode JA, Dudhal NV, Banavali SD, **Chiplunkar SV**: [2006] T-cell receptor γ and δ junctional gene rearrangements as diagnostic and prognostic biomarker for T-cell Acute Lymphoblastic Leukemia. *Leukemia and Lymphoma*, 47(4),769-70.
30. Wadia P.P., Atre N., Pradhan T., Mistry R. and **Chiplunkar S.V.** [2005] Heat Shock protein induced TCR $\gamma\delta$ gene rearrangements in patients with oral cancer. *'Oral Oncology'*. 41, 175-182.
31. Kode J.A., Dudhal N.V., Banavali S.D., Advani S.H. and **Chiplunkar S.V.** [2004] Clonal T-cell receptor γ and δ gene arrangements in T-cell acute lymphoblastic leukemia at diagnosis: Predictor of prognosis and response to chemotherapy. *Leukemia & Lymphoma*, 45(1):125 - 133.
32. Dadke D., Jaganath P., Krishnamurthy S. and **Chiplunkar S.V.** [2002] The detection of HBV antigens and HBx-transcripts in an Indian fibrolamellar carcinoma patient: a case study. *Liver* 22:87-91.
33. **Chiplunkar, S.V.** [2001] The immune system and cancer. *Current Science*, Vol.81.No.5, 542-546.
34. Thomas M.T., Badwe,R.A., Deshpande,R.K., Samant,U.C., **Chiplunkar,S.V.**[2001] Role of adhesion molecules in recruitment of V δ 1 T cells from the peripheral blood to the tumor tissue of esophageal cancer patients. *Cancer Immunol Immunother* 50, 218-225.
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37. Thomas,M. L., Samant,U. C.,Deshpande, R. K., **Chiplunkar, S. V.**[2000] Gamma Delta T cells lyse autologous and allogenic esophageal tumors: involvement of heat shock proteins in the tumor cell lysis. *Cancer Immunol.Immunotherapy* , 48, 653-659.
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42. Damodaran A, Gangal S.G., Pichan D., Amin K, Fakih, A.R., Rao R. and **Chiplunkar S.V.** [1997] Analysis of DNA ploidy and expression of tumor associated antigens on human oral carcinomas xenografted in nude mice. *Eur.J. Cancer, Oral Oncology*, 33(6), 402-407.
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44. Chavan S.S., Amarapurkar, D.N., Karlo, R.H. and **Chiplunkar S.V.** [1995] Frequency analysis of proliferating and cytotoxic T cells in livers and peripheral blood of patients with chronic hepatitis B *Med. Microbiol.* 43, 277-281.

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46. Kode, J.A., **Chiplunkar S.V.**, Samson P.D., Deo, M.G., and Gangal S.G. [1994] Immunoprecipitation of mycobacterial antigens with sera from patients with leprosy. *Acta Leprologica* 9, 89-94.
47. Gangal, S.G. and **Chiplunkar S.V.** [1993] Immunology of Cancer, *Biology Education*, 10, 43-45.
48. Shinde, S.R., **Chiplunkar S.V.**, Butlin ,R., Samson P.D., Deo M.G. and Gangal S.G. [1993] Lymphocyte proliferation, IFN- γ production and limiting dilution analysis of T cell responses to ICRC and Mycobacterium leprae antigens in leprosy patients. *International J. Leprosy* 61, 51-58.
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50. Maniar H.S., Desai, S.A., **Chiplunkar, S.V.**, Amin, M.K., Rao, R.S. and Gangal S.G. [1993] Modulation of tumor associated antigen expressed on human squamous cell carcinoma cell lines by recombinant interferon alpha. *European J. Cancer Oral Oncology*, 29B,57-61
51. Gulle H, Schoel, B., **Chiplunkar S.V.**, Gangal, S.G., Deo, M.G. and Kaufmann, S.H.E. [1992] T-cell responses of leprosy patients and healthy contacts toward separated protein antigens of Mycobacterium leprae. *International J. Leprosy.* 60, 44-53.
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54. Shinde S.R., **Chiplunkar S.V.**, Butlin, R., Samson, P.D., Deo, M.G. and Gangal S.G. [1991] Mitogen induced proliferation and cytokine production by lymphocytes from leprosy patients. *Acta Leprologica.* 7, 397-402.
55. Tatake, R.J., Maniar, H.S., **Chiplunkar S.V.**, Somsaundaram, R., Amin M.K., Saikia, T. and Gangal, S.G. [1991] Antibody dependent cellular cytotoxicity and complement mediated cytotoxicity of leukemic cells mediated by anti-K562 monoclonal antibodies. *J. Clin. Lab. Immunol.*, Feb. 87-91.
56. **Chiplunkar S.V.**, Deshmukh MV., Samson, P.D., Butlin, R., Bhatki, W.S., Chulawalla, R.G., Deo, M.G., and Gangal, S.G. [1990] Natural Killer cell-mediated and antibody-dependent cellular cytotoxicity in leprosy. *International J. Leprosy.* 58, 334-341.
57. **Chiplunkar S.V.**, Kudalkar, J.L., Butlin, R., Deo, M.G., and Gangal, S.G. [1990] Recognition of ICRC and Mycobacterium leprae antigens by sera from leprosy patients. *J. Trop. Med. Parasitol*, 41, 317-318.
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62. Kaufmann ,S.H.E., Flesch, I., **Chiplunkar S.V.**, DeLibero, G. [1988] Macrophages, Helper T cells and cytolytic T cells. Possible contribution to host defence against mycobacterium. *Bacteria-Host Cell Interaction*, 311-325.

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64. **Chiplunkar S.V.**, Langhorne J. And Kaufmann, S.H.E. [1986] Stimulation of B cell growth and differentiation by murine recombinant Interleukin-1. *Journal of Immunology*, 137, 3748-3752.
65. **Chiplunkar S.V.**, DeLibero G. And Kaufmann, S.H.E. [1986] Mycobacterium leprae specific Lyt- 2 T lymphocytes with cytolytic activity. *Infection and Immunity*, 54, 793-797.
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PUBLICATION IN BOOKS.

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