

## Curriculum vitae

**Sunil K. Arora, Ph.D., MAMS**

**Current:** Professor  
**Placement:** Dept. of Immunopathology,  
Head, Dept. of Translational & Regenerative Medicine  
Postgraduate Institute of Medical  
Education & Research,  
Chandigarh-160012, INDIA



**Education:** Ph.D. (Immunopathology) 1987  
PGIMER, Chandigarh, India  
  
M.Sc. (Hons. School) Biochemistry, 1980  
Panjab University, Chandigarh, India  
  
B.Sc. (Hons. School) Biochemistry, 1978  
Panjab University, Chandigarh, India

**Google-scholar link:** <https://scholar.google.com/citations?user=dteDnjAAAAAJ&hl=en>  
Citations: 4558; h-index: 33; i10 index: 91

**Honour:** Membership of the **National Academy of Medical Sciences** (India)- Elected  
Feb 2004

### **Affiliations:**

May 1991 – May 1993  
POST-DOCTORAL FELLOW-Dept. of Medicine, Div. of Infectious Diseases, Univ. of Texas Health Science  
Centre at San Antonio, Texas, USA

June 1993 – June 1999  
ASSISTANT PROFESSOR-Dept. of Immunopathology, PGIMER, Chandigarh, India

July 1999 – June 2003  
ASSOCIATE PROFESSOR-Dept. of Immunopathology, PGIMER, Chandigarh, India

July 2003 – June 2008  
ADDITIONAL PROFESSOR-Dept. of Immunopathology, PGIMER, Chandigarh, India

July 2008- continuing  
PROFESSOR-Dept. of Immunopathology, PGIMER, Chandigarh.

December 2013 – continuing  
Professor In-charge- Dept of Translational & Regenerative Medicine, PGIMER, Chandigarh.

### **Awards/Honours:**

YOUNG-INVESTIGATOR AWARD: Indo-US collaborative Contraceptive Development and  
Reproductive Immunology project  
Awarded by the USAID-DBT 1991

VISITING SCIENTIST: University College of London (UCL), London, UK.  
Jan 2001 to May 2001.

VISITING PROFESSOR: Alex Mowat Immunopathology Laboratory,  
King's College London (KCL), London, UK.  
May 2004 to July 2004

VISITING GUEST FACULTY	Laboratory for Clinical and Biological Studies (LCBS), University of Miami-School of Medicine, Miami, FL, USA Aug.2007 to Jan. 2008
VISITING GUEST PROFESSOR	Department of Clinical Immunology and Rheumatology, Hanover Medical School, Hanover, Germany May/June 2008 & Nov. 1 <sup>st</sup> to 14 <sup>th</sup> 2009
FOGARTY AITRP FELLOW	Department of Pathology, VA Medical Center, New York University School of Medicine (NYUSoM), New York, USA. June-July 2012.
SENIOR SCIENTIST ORATION AWARD	Senior Scientist Oration Award for the year 2018 by the Indian Immunology Society conferred on 1 <sup>st</sup> Nov. 2018 in the Annual Conference of Indian Immunology Society (IMMUNOCON-2018) at THSTI, Faridabad.

***Membership of academic bodies:***

**Member of the National Academy of Medical Sciences (India)-**  
Admitted Feb 2004

**Member –Technical Resource Group** for Lab Services  
National AIDS Control Organization (NACO-Govt. of India)- 2018 onwards

**Member- Technical Expert Committee-** Immunodiagnostic Kit Laboratories  
National Institute of Biologicals (NIB), Noida- 2017 onwards

**Chairman-IAEC**  
Institute Animal Ethics Committee (PGIMER, Chandigarh)- 2017 onwards

**Member**, Institute Committee for Stem Cell Research- Sept. 2011 onwards  
**Member**, Institute Research Review Committee- 2008 onwards

**Member of Advisory Board**  
Biosciences Research Institute, Bangalore- Aug, 2009  
International Journal of Immunology Research-July 2013

**President (2018-2022)**  
Indian Immunology Society

**President (2021 –2024)**  
Federation of Immunological Societies of Asia-Oceania (FIMSA)

**Member Editorial Board**  
1. Recent patents in antiviral drugs  
2. Gastroenterology and Hepatology Research journal  
3. Global J Breast Cancer Research  
4. International J Immunology  
5. Current AIDS Research

**Guest Editor**  
Expert Reviews on Immunology Vaccines and Informatics (Aug. 2014 onwards)  
Exploration in Immunology (Journal): June 2022 - onwards

***Research Interests:***

1. Identification and evaluating the protective efficacy of novel prophylactic and therapeutic vaccine candidate antigens of *Leishmania donovani* using epitope mapping and molecular techniques.

2. Evaluating immunomodulatory and regenerative potential of mesenchymal stem cells in bone degenerative disorders like RA and osteoporosis
3. Evaluating the role of Cancer Stem cells in aggressive behaviour of breast cancer
4. Evaluating molecular mechanisms leading to cellular immune and dendritic cell defects in chronic viral infections; mainly HIV and HCV.
5. Evaluating the molecular mechanisms related to *Mycobacterium tuberculosis* mediated genetic and phenotypic diversity of HIV-1 in co-infected host.
6. Molecular evaluation of various growth factors effecting the metastasis of breast carcinoma and hepatocellular carcinoma

**Research Projects (completed) as Principal Investigator:**

1. Cloning of gene(s) of *Leishmania donovani* expressing antigen(s) having protective potential- 4 years (funded by Dept. of Biotechnology, Ministry of Science and Technology, Govt. of India)- completed Jan 2004
2. Validation of multiplex PCR for the detection of six organisms in unexplained granulomatous uveitis- 3 years (funded by Dept. of Science and Technology, Govt. of India) on going (2002-Oct. 2005)
3. Evaluating the immuno-modulatory properties of Mw-vaccine in tuberculosis patients- a multi-centric clinical study – 3 years (funded by DBT, Govt of India) On going (2004-2007)
4. Protective efficacy of recombinant antigens of leishmania using human compatible adjuvants (funded from DBT, Govt. of India) on going 2005-2008.- continued till 2009
5. Genotypic analysis of drug-resistance associated mutations in the pol gene of HIV-1 in North India- 3 years (funded by Indian Council of Medical Research, Govt of India) – 2006-2009- continued till 2010
6. Role of innate-immune-responses in resistance to infection in HIV-exposed but sero-negative individuals- Indo\_German – ICMR collaborative project. (2008-2011)
7. Mechanisms involved in down-regulation of effector cell activity in tuberculosis and HIV co-infections' DBT (2008-2011).
8. Evaluate the maturation defects in chronic viral hepatitis- DST, New Delhi India. 2012-2015
9. Analysis of innate immune genes and identification of novel signature SNPs associated with immunological/virological discordance in HIV-1 infection- DBT, New Delhi India. 2012-2015
10. Elucidating the molecular mechanisms of DC dysfunction in non-responders to antiviral therapy in individuals infected with HCV Genotype- CSIR, New Delhi India. 2012-2015
11. To evaluate the role of negative regulatory factors in the functional impairment of dendritic cells during HIV-1 infection- ICMR, New Delhi India. 2012-2014
12. Cytokine Gene Polymorphism & Its Association with HIV Disease Progression & Effector Cell Functions. ICMR Sr Res Fellowship-2011 onwards
13. To investigate the immunomodulatory potential of recombinant *Leishmania* antigens rA6, rF14 and rLdP1 by studying their interaction with macrophages- ICMR.
14. Assessing the anti-HIV properties of some novel mannose-binding lectins (MBLs) from Indian subcontinent-ICMR
15. To evaluate the role of M. tuberculosis in functional modulation of the host intrinsic anti-viral factors influencing the HIV disease progression among HIV-TB co-infected individuals.-ICMR
16. To evaluate the role of Mycobacterium tuberculosis in functional regulation of host immune checkpoint molecules among HIV-TB co-infected individuals (SERB).

**Research & Teaching Experience:** 33 years

Teaching MD Pathology residents, M.Sc. Immunopathology students and Ph.D. students

**Thesis guided:**

Ph.D. projects:	Twenty-Five
MD projects:	Ten
M.Ch projects	Two

**Reviewer for Journals:**

Plos One  
BRC Cancer  
Transactions of The Royal Society of Hygiene and Tropical Medicine  
Experimental Parasitology  
Parasite Immunology  
Vaccine  
Chest  
British J of Dermatology  
Journal of Neurology, Neurosurgery and Psychiatry  
Indian J of Medical Research  
Indian J of Pathology and Microbiology

**Member Editorial Board:**

Recent Patents in Anti-infective drugs  
Gastroenterology and Hepatology Research  
International Journal of Immunology Research  
Exploration in Immunology

**Patents/Submissions: GenBank data Base:**

1. Patent for Multiplex PCR for detection of *M. tuberculosis*, *Toxoplasma gondii* and clinically important fungi
2. Patent for multiplex PCR for detection of Cytomegalo virus, Herpes simplex virus and Varicella zoster virus
3. **US Patent Granted: No. US 7,504,494 82 granted Mar 17, 2009** for invention related to a multiplex PCR assay capable of screening or detecting the relevant microbial organism specific to *Mycobacterium tuberculosis*, *Toxoplasma gondii*, pathogenically important fungi and cytomegalo virus (CMV) in a clinical sample.

Three novel gene sequences from *Leishmania donovani* submitted to genBank database. Definitions—

1. *Leishmania donovani* ribosomal P-1 like protein mRNA- homologous to Eukaryotic Initiation factor (eIF-4A) (accession number AY161269)
2. *Leishmania donovani* acidic ribosomal protein P0 gene (accession number AY180912)
3. *Leishmania donovani* novel gene having no similarity to any of existing sequences in gene data bank. (accession number: [AY377788](#))

**Responsibilities held and Achievements:**

**Clinical Lab. Services:**

1. Molecular Pathology & Immunological diagnosis:

Developed and standardized the most advanced molecular techniques in Immunopathology for detailed immune profile and for the fast and accurate diagnosis. The techniques involving ELISA, Fluorescence, Immune-blot and PCR (Polymerase Chain Reaction and development of specific probes) have been validated on hundreds of clinical samples from the extra-pulmonary sites (ocular fluids, aqueous and vitreous humor, CSF, skin biopsies, Gut biopsies, pericardial fluid, ascetic fluid etc.) and pulmonary tuberculosis with sputum, pleural fluid or biopsy.

Full serological spectrum of investigations including culture from bone marrow or spleen aspirate for the diagnosis of cutaneous as well as visceral Leishmaniasis have been developed and now being offered as routine service to patients.

Molecular diagnosis and typing of CMV, EBV and HPV using PCR and western blot.

2. HIV diagnosis:

Reporting routine HIV diagnostic tests, CD4/CD8 counting, viral load by RT-PCR

Coordinator External Quality Assurance Program for the diagnosis of HIV/AIDS in the Union Territory of Chandigarh.

Coordinator for the training programs for the Consultants, Doctors, Technicians and other Health Care Workers regarding HIV/AIDS

3. Stem Cell research:

Immunomodulatory and regenerative potential of Mesenchymal Stem cells

Cancer Stem cells

4. Immune profile studies:

Cell Mediated & Humoral Immune Responses using Blast transformation, cytokine analysis and Flowcytometry for phenotypic characterization of various populations of cells

**Publications:**

Papers:	178
Reviews in journals:	7
Chapters in books:	15
Editorials:	2

**Invited/Guest Lectures Delivered:** 195

**Age:** 64 years  
**Health:** Excellent

**Correspondence:** No. 6087 Modern Housing Complex, Manimajra  
Chandigarh, PIN: 160101, India  
Ph.: +91-98728 66087  
Email: [skarorain@gmail.com](mailto:skarorain@gmail.com) ; [arora.sunilkumar@pgimer.edu.in](mailto:arora.sunilkumar@pgimer.edu.in)

**List of publications:**

1. Modified enzyme linked immunosorbant assay with excreted factor of *Leishmania mexicana*. Arora SK and Sehgal S. **Ind J Parasitol**; 1984; 6: 97-98.
2. A sensitive ELISA for detection of circulating antigen for sero-diagnosis of kala azar. Sinha R, Arora SK and Sehgal S. **Ind J Med Res**, 1988; 5:64-67
3. Role of immunosuppression in *Leishmania mexicana* induced lesions in hamsters. Sehgal S and Arora SK. **Ind J Med Res**, 1985; 81:157-161.
4. Use of excreted factor of *Leishmania mexicana* in sero-diagnosis of kala azar. Arora SK, Datta U and Sehgal S. **Ind J Med Res**, 1985; 81: 157-161.
5. Effect of temperature on footpad lesions induced by *Leishmania mexicana*. Sehgal S and Arora SK. **Ind J Med Res**, 1987; 30: 25-29.
6. diagnostic problems of kala azar in non-endemic areas. Datta U, Sehgal S and Arora SK. **Ind J Path Microbiol**, 1987; 30:25-29.
7. Evaluation of CIEP for sero-diagnosis of kala azar. Datta U, Arora SK, Sinha R and Rayat CS. **Bull PGI**, 1988; 22:96-99.
8. A sensitive ELISA for detection of circulating antigen for sero-diagnosis of kala azar. Sinha R, Arora SK and Sehgal S. **Ind J Med Res**, 1988; 5:64-67
9. AIDS in India: a differing spectrum. Sehgal S, Arora SK and Grewal GS. **Virus Information Exchange Newsletter** 1988; 88:138-142.
10. AIDS in India: a report of three cases with review of literature. Sehgal S, Arora SK, Rajwanshi A and Deodhar SD. **Asi Pac J Immunol** 1989; 6:39-42.
11. Identification of major antigens of *Leishmania donovani* promastigotes using kala azar sera. Arora SK and Sehgal S. **Med Microbiol Immunol** 1988; 178:81-88.
12. Receptor mediated drug-delivery of macrophages: a novel chemotherapeutic approach against leishmaniasis. Mukhopadhyaya A, Chaudhri G, Arora SK, Sehgal S and Basu SK. **Science** 1989; 244:705-707.
13. Use of whole parasites for quick screening of hybridomas against *leishmania donovani*. Sinha R, Arora SK and Sehgal S. **Hybridoma** 1989; 8:259-261.
14. HIV infection in students: a new problem in India. Sehgal S, Kumar B, Arora SK and Kumar S. **Virus Information Exchange Newsletter** 1989; 6:20-21.
15. Genital herpes- a marker of HIV infection. Kumar B, Rajagopalan M, Arora SK and Sehgal S. **Ind J Dermatol Venereol Leprol**, 1990; 56:387-388.
16. Detection of HPV in carcinoma by DNA hybridisation. Arora SK, Sehgal S and Gupta BD. **Virus Information Exchange Newsletter** 1991; 8:72.
17. Incidence of HPV-6 and HPV-11 in genital warts in Chandigarh. Arora SK, Jain A, Kumar B and Sehgal S. **Virus Information Exchange Newsletter** 1991; 8:71-72.
18. Incidence of HPV-6 and HPV-11 in women with healthy cervix. Jain A, Arora SK, Malhotra S and Sehgal S. **Virus Information Exchange Newsletter** 1991; 8:72-73.
19. Use of in vitro method to assess different brands of anti-leishmania drugs. Arora SK, Sinha R and Sehgal S. **Med Microbiol Immunol** 1991; 180:21-27.
20. Detection of *leishmania* antigen in kala azar patients using monoclonal antibodies. Sinha R, Arora SK, Datta U and Sehgal S. **Med Microbiol** 1992; 36:391-400.
21. Humoral antibody response in *leishmania tropica* infection. Sehgal S, Sinha R, Mallick R, Arora SK and Hazra PK. **J Infect** 1992; 24:311-316.
22. Use of monoclonal antibodies for the detection of *leishmania* antigens in kala azar patients. Sinha R, Sehgal S, Datta U and Arora SK. **Microbiol Immunol** 1992; 32:391-400.
23. Comparative evaluation of the anti-heat shock protein antibodies in SLE and healthy controls. Arora SK, Singh G and Sehgal S. **Scand J Rheumatol**. 1995; 24:160-163.
24. Lack of serological specificity of recombinant *leishmania* hsp70. Arora SK, Melby PC and Sehgal S. **Immunol Cell Biol** 1995; 73:446-451.
25. Recombinant heat shock protein is recognised from individuals with prior *L.donovani* infection. Arora SK, Sehgal S, Tryon VV and Melby PC. **Immunol Infect Dis** 1995; 5:282-286.
26. Recent advances in the technology for diagnosis of tuberculosis. In, *New Biology*, etd RC Sobti, Pb Univ publications, Chandigarh, 1996; pp62-72.
27. Genetic polymorphism in *leishmania* isolates using restriction enzyme length polymorphism of kDNA and cDNA probes. Kapoor GS, Arora SK and Sehgal S. **Med Microbiol Immunol** 1998; 186:209-214.
28. Heterogeneity in the heat shock protein gene of *leishmania* isolates. Arora SK, Singh G and Sehgal S. **Immunol Cell Biol** 1998; 76:186-189.

29. Effect of growth hormone on fibrinolytic system in rat. Bubber P, Singh KP, Arora SK and Bansal DD. **Ind J Exp Biol** 1998; 36:514-516.
30. Management of presumed intraocular tuberculosis: possible role of polymerase chain reaction. Gupta V, Arora SK, Gupta A, Ram J, Bambery P and Sehgal S. **Acta Ophthalmol Scand** 1998; 76:679-682.
31. Molecular characterisation of leishmania isolates. Arora SK, Kapoor GK and Sehgal S. **J Parasit Dis** 1998; 22:71-78.
32. Basic concepts in genetics:molecular techniques to detect DNA, RNA and proteins. Arora SK. In **Proc Int Sym Ind Soc Hearing Speech therapists**, Chandigarh, Feb 1999.
33. Diagnostic efficacy of polymerase chain reaction in granulomatous uveitis. Arora SK, Gupta V, Gupta A, Bambery P, Kapoor GS and Sehgal S. **Tubercle Lung Dis** 1999; 79:229-233.
34. Development of polymerase chain reaction dot-blotting system for detecting cutaneous tuberculosis. Arora SK, Kumar B and Sehgal S. **Br J Dermatol** 2000; 142:72-76.
35. Anti-hsp antibodies in patients with SLE: a disease activity related profile. Arora SK, Wanchu A, Bambery P, Singh KJ and Datta U. **Aplar J Rheumatol** 2000; 3:3-7.
36. Identification of sero-specific epitope of recombinant hsp70 of leishmania donovani. Arora SK, Kaur D, Kapoor GS and Sehgal S. **J Parsit Dis** 2000; 24:19-22.
37. Diagnosis of congenital tuberculosis using polymerase chain reaction. Kaur A, Marwaha R, Arora SK et al. **Am Ped Infect Dis J** 2000; 19:1109-1111.
38. Demonstration of monoclonality in peripheral blood lymphocytes in Multiple Myeloma. Datta U, Rakesh KN, Varma S, Varma N and Arora SK. **Proc Int Symp Recent Advances in Mol Biol Allergy Immunol**, Baroda, India, Sept 2000.
39. Polymerase chain reaction positive tubercular retinal vasculitis: Clinical characteristics & management. Gupta A, Gupta A, Arora SK, Bambery P and Sehgal S. **Retina** 2001; 21:435-444.
40. Evaluation of polymerase chain reaction for the detection of Mycobacterium tuberculosis in pleural fluids. Babu NS, Sehgal S, Jindal SK and Arora SK. **Chest** 2001; 119:1737-1741.
41. Decline in beta2 microglobulin levels after anti-tubercular therapy among HIV/TB infected individuals. Wanchu A, Arora SK, Bhatnagar A, Sud A, Bambery Pand Singh S. **Ind J Chest Dis Allied Sci.** 2001; 43:211-215.
42. Suppression of beta2 microglobulin by pentoxiphylin therapy in asymptomatic HIV infected individuals. Wanchu A, Arora SK, Bhatnagar A, Sud A, Bambery P, Singh S. **Ind J Med Res** 2001; 113:75-77.
43. Risk assessment in Gene therapy. Anand A and Arora SK. Chapter in '**Manufacturing of gene therapeutics: Methods, Processing, Regulations and Validation**' Ed G Subramanian, Kluwer academic/Plenum publishers, New York 2002; pp331-337.
44. Analysis of intracellular cytokines by flow cytometry. Arora SK. **Proc of the Indo-US workshop on Advanced Flow Cytometry Univ of Miami**, USA 17-22<sup>nd</sup> Feb, 2002.
45. Tuberculosis: New advancements in diagnosis. Arora SK and Babu N. Editorial in **CHEST** 2002, 3(4): 179-180
46. HIV in North India: A profile of year 2000. Datta U, Arora SK, Minz RW, and James I. Submitted to the **BULLETIN OF PGI** 2002, 36(4):138-143.
47. Analysis of intracellular cytokines using flowcytometry. Arora SK. **METH CELL SCI.** 2002; 00:1-4.
48. Prevalence of HIV infection among high risk groups and STD clinic attendees in Chandigarh: A 7-year study. Sehgal S, Mujtaba S, Arora SK, Minz R and Kumar B. **IND J SEX TRANSM DIS**, 2002; 23:14-18.
49. Monoclonal Gene arrangement in peripheral blood lymphocytes in Multiple Myeloma Rakesh KN, , Datta U, Varma S, Varma N, and Arora SK. **PGI BULLETIN** 2003, 37: 48-51.
50. Presumed tubercular serpiginous choroiditis: clinical presentations and management. Gupta V, Gupta A, Arora SK., Bambery P, Dogra MR, Agarwal A. **OPHTHALMOL** 2003;110: 1747-1752.
51. Recognition of Leishmania donovani by CD4+ T-cells of naïve healthy uninfected individual, Pal N and Arora SK. Submitted to **J PARASIT DIS**, 2004; 28:11-16.
52. Beta-2 microglobulin as a surrogate marker for HIV infection: good correlation with CD4 counts. Wanchu A, Arora SK, Bhatnagar A, Sud A, Bambery P, Singh S. **IND J PATHOL MICROBIOL** 2004; 47:298-301.
53. Serum Interleukin-2 and interleukin-4 levels in patients with Sarcoidosis: influence of corticosteroid therapy. Gupta D, Jain P, Balamughesh T, Arora SK and Wanchu A. **LUNG INDIA** 2005; 22:12-15.
54. Recombinant antigens of Leishmania donovani inducing IFN-g release from Leishmania specific cell line, Arora SK, Pal NS & S.Mujtaba. **EXP PARASIT** 2005; 109:163-170.

55. Incidence of Lamivudine resistance associated mutations in *pol*-gene of HIV-1 in patients from North India: A preliminary report. Sachdeva N, Sehgal S, Datta U and Arora SK\*. **IND J PATHOL MICROBIOL**, 2005. ; 48: 337-340.
56. Simultaneous choroidal granuloma and epididymo-orchitis in tuberculosis: Short communication. Gupta V, Arora SK, Sachdeva, N., Bambery P and Gupta A. Paper accepted in **AM J OPHTHAL** 2005; 140:310-312.
57. Bcl2 and ROS1 expression in human meningiomas: an analysis with respect to histological subtype, Girish V, Pal NS, Anand A, Minz RW, Radotra BD and Arora SK. **IND J PATHOL MICROBIOL**, 2005; 48: 325-330.
58. Frequency of drug-resistance mutation coexisting with wild type in treatment-naïve patients in India. Sachdeva N, Sehgal S and Arora SK. eJ INT AIDS SOC, **Medscape General Medicine** 2005; 7(3).
59. Immune responses in patients with HIV infection after vaccination with recombinant Hepatitis B virus vaccine. N Pasricha, U Datta, Y Chawla, S Singh, Arora SK, A Sud, R W Minz, B Saikia, H Singh, I James, S Sehgal. **BMC Infectious Diseases**, Nov, 2005.
60. Poor response to Recombinant HBV vaccination in patients with HIV infection. Pasricha N, Datta U, Chawla YK, Singh S, Arora SK, Sud A, Minz RW, Saikia B, Singh H, James I and Sehgal S. **TROPICAL GASTROENTEROLOGY** 2005; 26(4):
61. Study of apoptosis in skin lesions of leprosy in relation to treatment and lepra reactions. Ajith, Gupta S, Arora SK, Kumar B. **INT J LEPROSY** 2005; 73(4): 269-276.
62. Functional study of CD4<sup>+</sup>CD25<sup>+</sup> Regulatory T-Cells in health and autoimmune hepatitis. Longhi MS, Hussain MJ, Rigai RR, Arora SK, Vergani GM, Vergani D and Ma Y. **J IMMUNOLOGY** 2006, 176: 4484–4491.
63. Comparative analysis of HBV and HCV infection in hepatocellular carcinoma and chronic liver disease- an autopsy based study. Vaiphei K, Pal NS and Arora SK. **IND J PATH MICROBIOL** 2006; 49(3): 357-361.
64. Successful management of Tubercular Subretinal granuloma. Gupta V, Gupta A, , Sachdeva N, Arora SK, Bambery P. **OCCUL IMMUNOL INFLAMM** 2006;14:35-40.
65. Detection of high-risk human papilloma virus type 16/18 in cutaneous warts in immunocompetent patients, using polymerase chain reaction. Payal R, Gupta S, Aggarwal R, Handa S, Radotra BD and Arora SK. **DERMATOL ONLINE JOURNAL** 2006 Oct 31;12(6):1.
66. Fungal endophthalmitis complicating subconjunctival injection of triamcinolone acetonide in anterior scleritis. Singh R, Gupta V, Chakarborty A, Nijhawan R, Arora SK, Gupta A. **ANN OPHTHALMOL (SKOKIE)**. 2006 Fall; 38(3):253-6.
67. Prevalence of high risk Human Papillomavirus infection in women with benign cervical cytology using Polymerase chain reaction: A hospital based study from North India. Aggarwal R., Gupta S, Kaur S, Arora SK. **IND J CANCER**, 2006; 43(3):109-115.
68. Environment and Immunity. Arora SK and Gupta S. A chapter contributed to 'ENVIRONMENTAL HEALTH: HUMAN PERSPECTIVE' book ed by Rai DV; Anamaya publishers, New Delhi. Sept 2006.
69. Non-functioning mediastinal parathyroid adenoma with sarcoid-like granulomatous lymphadenopathy- case report" Amanjit Bal, Sachdeva MS, Joshi KJ, Bahera A, Arora SK and Gupta S. **APMIS** 2007; 115:784-788.
70. Intratumoral FOXP3 expression in infiltrating breast carcinoma: its association with clinicopathologic parameters and angiogenesis" Gupta S, Joshi K, Wig JD and Arora SK. **ACTA ONCOLOGICA**. 2007; 46(6):792-7.
71. Expression of Interferon-gamma inducible protein IP-10 and its receptor CXCR3 in chronic pancreatitis. Singh L, Wig JD, Vasishta RK and Arora SK. **PANCREATOLOGY** 2007; 7(5): 479-490.
72. An epitope-specific PCR test for diagnosis Leishmania donovani infections. Arora SK, Gupta S, Sachdeva N. **TRANS R SOC TROP MED HYG** 2007; 102(1):41-45.
73. Characteristics of Leishmania spp. isolated from a mixed focus of Cutaneous and visceral leishmaniasis in Himachal Pradesh. Sharma NL, Sood A, Arora SK, Kanga A, Mahajan VK, Negi AK and Sharma AK. **Internet J Third World Medicine** 2008. 7 (2): 1-7. DOI:10.5580/1683.
74. Drug-resistance associated genotypic alterations in *pol*-gene of HIV isolates from ART-naïve individuals in North India. Arora SK, Gupta S, Toor JS, Singla A. **AIDS RES HUM RETROVIRUSES** 2008; 24(2):125-30.



75. Mitochondrial dysfunction and apoptosis of acinar cells in chronic pancreatitis. Singh L, Bakshi DK, Majumdar S, Arora SK, Vasishta RK and Wig JD. **J GASTROENTEROL**. 2008; 43(6): 473-83.
76. Primary culture of pancreatic (human) acinar cells. Singh L, Bakshi DK, Wig JD, Vasishta RK and Arora SK. **DIGESTIVE DIS SCI**, 2008; 53(9):2569-75.
77. Human Papillomavirus and Skin Tag- is there any association? Gupta S, Aggarwal R, Gupta Somesh, Arora SK. **IND J DERM VENEREOL LEPROL** 2008; 74(3): 222-225.
78. Experimentally induced various inflammatory models and seizure: Understanding the role of cytokine in rat. Rao R S, Medhi B, Saikia U N, Arora SK, Jaideep S Toor, Pandhi P, Khanduja K L. **EURO NEUROPSYCHOPHARMACOL** 2008; 18:760-767.
79. Increased frequency of intra-tumoral CD4+ CD25+ Treg cells in hepatocellular carcinoma. Thakur S, Singla A, Rajwanshi A, Chawla Y and Arora SK. **J HEPATOLOGY** 2008; 48: Supplement 2, S136.
80. Hepatitis C virus co-infection in HIV infected patients: A North Indian cohort study. Singla A, Arora SK. In press article **IND J GASTROENT** 2008; 27 (5): 215.
81. Cellular defects in HIV infection. Singla A and Arora SK. PROC INT CONF BIOTECH APP NEUROIMMUNOMODULATION INFEC DIS, Nov 2008, pp 481-498.
82. Vaccination with a novel recombinant *Leishmania* antigen along with MPL provides partial protection against *L. donovani* challenge in experimental model of visceral leishmaniasis. Bhardwaj S, Vasishta RK and Arora SK. **EXP PARASITOL** 2009; 121:29–37.
83. High frequency of Loss of allelic integrity at Wilms' tumor suppressor gene-1 locus in advanced breast tumors associated with aggressiveness of the tumor. Gupta, Sachin, Joshi, Kusum, Wig, J., **Arora, SK**. **IND J CANCER** 2009; 46(4):301-308.
84. Recent advances in Leishmania vaccine development. Bhardwaj S and **Arora SK**. PROC NATL ACAD SCI (INDIA). 2009 (Section B); 79(Spl Issue): 1-14
85. Cervicogenital hCG and cervical length for prediction of preterm delivery in asymptomatic women at high risk for pre-term delivery. Adhikari K; Bagga R; Suri V; Masih S; **Arora SK**. **ARCH GYN & OBSTET** 2009; 280:565–572.
86. Clinical profile of 516 children affected by HIV in a tertiary care centre in northern India:14 years of experience. Singh S, Jata KR, Minz RW, **Arora SK**, Suri S, Sehgal S. **TRANS ROY SOC TROP MED HYG**. 2009, 103 (6), pp. 627-633.
87. The Implications of Higher TGF- $\beta$ 1, IGF-II and IGF-1R mRNA Expression in Infiltrating Breast Carcinoma and Their Association with Tumorigenesis and Angiogenesis. Gupta S, Joshi K, Wig JD and **Arora SK**. **AM J BIOMED SCI** Mar 2009; 1(2):157-165.
88. Potential role of CXCL10 in the induction of cell injury and mitochondrial dysfunction. Singh L, Arora SK, Bakshi DK, Majumdar S, Wig JD. **INT J EXP PATHOL** 2009; Dec.22 (Epub ahead of print). PMID: 20041963.
89. Dysfunction of monocyte derived dendritic cells in therapy naïve chronic hepatitis C patients. Rana D, Chawla YK, **Arora SK**. **IND J GASTRO** 2009; 28 (Suppl1):A90 [Abstract]
90. Allopregnanolone, the active metabolite of progesterone protects against neuronal damage in picrotoxin-induced seizure model in mice. Singh S, Hota D, Prakash A, Khanduja KL, **Arora SK**, Chakrabarti A. **PHARMACOL BIOCHEM BEHAVIOR** 2010; 94(3):416-22..
91. Association of alpha 2A adrenergic receptor gene (ADRA2A) polymorphism with irritable bowel syndrome, microscopic and ulcerative colitis. Sikander A, Rana SV, Sharma SK, Sinha SK, **Arora SK**, Prasad KK, Singh K. **CLIN CHIM ACTA**. 2010; 411:59-63.
92. To compare CSF adenosine deaminase levels and CSF-PCR for tuberculous meningitis. Rana SV, Chako F, Lal V, **Arora SK**, Prabhakar S, Sharma SK, Singh K. **CLIN NEUROL NEUROSURG**. 2010; 112:424-30.
93. Synthesis and Antileishmanial activity of Piperoyl-Amino Acid Conjugates. Inder Pal Singh, Shreyans K Jain, Amandeep Kaur, Sukhvinder Singh, Rajendra Kumar, Prabha Garg, Shyam S Sharma and **Arora SK**. **EUR J MED CHEM**. 2010;45:3439-3445.
94. Cervical length and cervicovaginal HCG for prediction of pre-term birth in women with signs and symptoms of pre-term labour. Bagga R, Takhtani M, Suri V, Adhikari K, Bhardwaj. S & **Arora SK**. **J OBSTET GYNAE**, 2010; 30(5): 451–455.
95. Prospective monitoring of BK virus reactivation in renal transplant recipients in north india. Thakur R, Arora SK, Nada R, Minz M, Joshi K. **TRANSPLANT INFECT DIS**. 2011; 13: 575-583.
96. Expansion of peripheral and intratumoral regulatory T cells in hepatocellular carcinoma: A case control study" Thakur S, Singla A, Chawla Y, Rajwanshi A, Kalra N, Arora SK. Submitted to **IND J PATH MICROBIOL** 2011; 54:448-53...

97. Efficacy of *Leishmania donovani* ribosomal P1 gene as potential DNA vaccine in experimental visceral leishmaniasis. Masih S, **Arora SK** and Vasishta RK. EXP PARASITOL 2011; 129: 55-64.
98. *In Vitro* Cytotoxicity of Multiwalled and Singlewalled Carbon Nanotubes on Human Cell Lines. Arora S, Kaur H, Kaur I, Kaur R, Bharadwaj S, Rana D, **Arora SK**, Bubber P, Bharadwaj L. J NANOTECH 2011 (Accepted article in press).
99. HBV specific T-cell responses in hepatitis B. Rana D, Menachery J, Chawla YK, Duseja A, Dhiman RK, **Arora SK**. TROP GASTRO 2011; 32(4): 273-278.
100. Monocyte-derived Dendritic cells in Non Alcoholic Fatty Liver Disease are maturation defective. Rana D, Duseja A, Chawla YK, **Arora SK**. J CLIN EXP HEPATOL, 2011; 1: A4 [Abstract]
101. Formylated phloroglucinols from *Eucalyptus loxophleba* foliage. Sidana, J, Singh S, **Arora SK**, Foley WJ, Singh IP. FITOTERAPIA 2011; 82: 1118–1122.
102. Prediction of drug-resistance in HIV-1 Subtype C based on protease sequences from ART naïve and first line therapy failures in North India using genotypic and docking analysis. Toor JS, Verma R, Gupta P, Garg P, Sharma A and Arora SK. ANTIVIRAL RESEARCH 2011; 92:213-18.
103. Establishment of reference CD4+ T cell values for adult Indian population. Thakur MR, Abraham P, **Arora SK**, Balakrishnan P, Bandyopadhyay B, Joshi A, K. Devi R, Ravi V, Vajpayee M, Desai A, Mohanakrishnan J, Narain K, Ray K, Patil S, Singh R, Singla A and Paranjape R. AIDS RESEARCH AND THERAPY 2011; 8(1):35.
104. Terpenoidal constituents of *Eucalyptus loxophleba* ssp. *Lissophloia* Sidana J, Singh S, **Arora SK**, Foley WJ and Singh IP. PHARMACEUT BIOL. 2012; 50(7): 823–827.
105. Downregulation of nuclear factor- $\kappa$ B signalling by polyphenolic compounds prevents endotoxin-induced liver injury in a rat model. Bharrhan, S; Chopra, K; **Arora, SK**; Toor, JD; Rishi, P. Accepted for publication INNATE IMMUNITY 2012; 18(1):70-9.
106. Increased frequency of NK cells and plasmacytoid dendritic cells in HIV-exposed yet sero-negative individuals. Singla A, Jacobs R, Schmidt RE, Wanchu A and **Arora SK**. Afr J AIDS Res 2012; 2:2-2.
107. Dual Positivity of Donor and Recipient Plasma for BK Virus Confers a High Risk for Development of BK Nephropathy in Renal Allograft. Thakur R, Joshi K, Minz M, Singla A, Nada R, **Arora SK**, Jha V, and Sakhuja V. TRANSPLANTATION PROCEEDINGS, 2012; 44:717–720.
108. Paromomycin loaded albumin microspheres: Efficacy and stability studies. Khan W, Kumar R, Singh S, **Arora SK**, Kumar N. DRUG TESTING AND ANALYSIS 2013; 5(6):468-73. doi: 10.1002/dta.389. Epub 2012.
109. Chapter: Human Immunodeficiency Virus: Biology and Natural History Infection. **Arora SK**, Paranjape R, Tripathy S, Wanchu A. In: Somesh Gupta, Bhushan Kumar, eds. SEXUALLY TRANSMITTED INFECTIONS 2<sup>nd</sup> edn. New Delhi, India: Elsevier, 2012: Chapter 66, pages 779-794. ISBN: 978-81-312-2809-8.
110. Functional reconstitution of defective myeloid Dendritic Cells in chronic Hepatitis C infection on successful anti-viral treatment. Rana D, Chawla Y, Duseja A, Dhiman RK, **Arora SK**. LIVER INTERNATIONAL 2012; 32(7): 1128-37. doi: 10.1111/j.1478-3231.2011.02754.x.
111. Maturation defective myeloid Dendritic Cells in Non-alcoholic fatty liver disease patients release inflammatory cytokines in response to endotoxin. Rana D, Chawla Y, Duseja A, Dhiman RK, **Arora SK**. HEPATOL INTNL 2012; 7(2):562-569. DOI 10.1007/s12072-012-9371-6.
112. Defective maturation of dendritic cells during HIV-1 infection is associated with increased expression of SOCS-1. Sachdeva M, Sharma A, **Arora SK**. BMC INFECT DIS 2012, 12 (Suppl 1):P88. doi: 10.1186/1471-2334-12-S1-P88.
113. CD20+ T cell numbers are decreased in untreated HIV patients and recover after HAART. Förster F, Singla A, **Arora SK**, Schmidt RE, and Jacobs R. IMMUN LETT 2012. 146(1-2):74-78. doi.org/doi:10.1016/j.imlet.2012.05.004.
114. Immunohistochemical characterization of North Indian population based study. Kuadawla S, Bal A, Joshi K, **Arora SK** and Singh G. APMIS. 2012; 120:1008-1019. DOI 10.1111/j.1600-0463.2012.02933.x.
115. BRCA1-methylated sporadic breast cancers are BRCA-like in showing a basal phenotype and absence of ER expression. Bal A, Verma S, Joshi K, Singla A, Thakur R, **Arora SK** & Singh G. Virchows Archiv. 2012; 461:305-312. DOI 10.1007/s00428-012-1286-z.
116. Prediction of NRTI drug resistance in HIV-1 subtype C among first line antiretroviral-experienced virological failure patients from North India using genotypic and docking analysis. Toor JS, Kumar R, Garag P, Sharma A, **Arora SK**. J AIDS CLIN RES 2012, S5: 005. doi:10.4172/2155-6113.S5-005.

117. Hepatitis B Virus Reverse Transcriptase Mutations in Treatment-Naïve Chronic Hepatitis B Patients. Singla B, Chakraborti A, Sharma BK, Kapil S, Chawla YK, Arora SK, Das A, Dhiman RK and Duseja A. J MED VIROL 2013; 85:1155-62.
118. Differential expression of Rac-1, CxCR4 and CCR5 on CD4 T-cells at different stages of HIV-1 disease relate to its progression in therapy-naïve individuals. Toor JS, Sharma A, Kamboj SS and **Arora SK**. J AIDS CLIN RES. 2013; 4:207. doi:10.4172/2155-6113.1000207.
119. Viral proteins mediate upregulation of negative regulatory factors causing downmodulated dendritic cell functions in chronic hepatitis C virus infection. Rana D, Chawla YK, Duseja A, Dhiman RK and **Arora SK**. EUR MED J –HEPATOLOGY 2013;1:68-76
120. Hepatitis B Virus Reverse Transcriptase Mutations in Treatment Naïve Chronic Hepatitis B Patients. Bhupesh Singla, Anuradha Chakraborti, Bal Krishan Sharma, Shweta Kapil, Yogesh K. Chawla, **Sunil K. Arora**, Ashim Das, Radha K. Dhiman, and Ajay Duseja. J MED VIROL. 2013; 85:1155–1162.
121. Success of Antiviral Therapy in Chronic Hepatitis-C Infection Relates to Functional Status of myeloid Dendritic Cells Rana D, Chawla YK and **Arora SK**. Invited review submitted to Special issue, 'Translational Research in Health and Disease' in IND J MED RES. 2013; 138(5): 766-778.
122. Translocation and Toxicity of Docetaxel Multi-Walled Carbon Nanotube Conjugates in Mammalian Breast Cancer Cells. Arora Shweta, Kumar R, Kaur H, Rayat CS, Kaur I, **Arora SK**, Srivastava J, and Bharadwaj LM. J BIOMED NANOTECH 2014; 10:1-9.
123. High producer haplotype (CAG) of -863C/A, -308G/A and -238G/A polymorphisms in the promoter region of TNF- $\alpha$  gene associate with enhanced apoptosis of lymphocytes in HIV-1 subtype C infected individuals from North India. Singh S, Sharma A, **Arora SK**. PLOS ONE. 2014, 9(5): e98020. doi:10.1371/journal.pone.0098020.
124. Mycobacterium tuberculosis modulates the gene interactions to activate the HIV replication and faster disease progression in a co-infected host. Toor JS, Singh S, Sharma A, **Arora SK**. PLOS ONE 2014; 9(9): e106815.
125. Time trend analysis of HIV infection showing impact of national programs in an ICTC set up in a tertiary care hospital in North India. Mehta G, Kaur A, Singh G and Arora S K. BMC Infectious Diseases. 2014; 1471-2334/14/S3/P23.
126. Increased frequency of activated cytotoxic T-lymphocytes in HIV infected patients facilitate HIV associated dementia. Mehta G and Arora S K. J Vaccines 2014; doi.org/10.4172/2157-7560.S1.022.
127. Risk Factors for Transfusion Transmissible Infections Elicited on Post Donation Counselling in Blood Donors: Need to Strengthen Pre-donation Counselling. Sachdev S, Mittal k, Patidar G, Marwaha N, Sharma RR, Duseja A, Chawla YK and **Arora SK**. Ind J Hematol Blood Transfus. Feb.2015. DOI 10.1007/s12288-014-0460-7.
128. Perinatal Transmission of HIV in Women Receiving Anti-retroviral Prophylaxis/Therapy during Pregnancy with Zidovudine, Lamivudine, Nevirapine: Experience at Tertiary Care Center in India. Meena K; Arora A; Bagga,R; Kalra A; Kumar P; Sharma A; **Arora SK**. Journal of Postgraduate Medicine, Education and Research, 2015; 49(3):115-120.
129. Response to potent anti-HBV agents in chronic hepatitis B and combined effect of HBV reverse transcriptase mutations. Singla B, Bhattacharyya R, Chakraborti A, Sharma BK, Kapil S, Chawla YK, **Arora SK**, Das A, Dhiman RK, Duseja A. Gene 2015; 567(1): DOI: 10.1016/j.gene.2015.04.060.
130. Modified Release Biodegradable Polymeric Microspheres of Stavudine: Cell Viability, Cellular Uptake, Hemolysis Studies and In Vivo Pharmacokinetics. Srivastava S; Kumar R; **Arora SK** and Sinha VR. Current HIV Research, 2015, 13(6). DOI: 10.2174/1570162X13666150624112345.
131. Immunology of hepatocellular carcinoma. Sachdeva M, Chawla YK, **Arora SK**. World J Hepatol 2015; 7(17): 2080-2090. dx.doi.org/10.4254/wjh.v7.i17.2080.
132. Dendritic cells: The warriors upfront-turned defunct in chronic hepatitis C infection. Sachdeva M, Chawla YK, **Arora SK**. World J Hepatol 2015, 7(19): 2202-2208. Doi: 10.4254/wjh.v7.i19.2202.
133. Functional Impairment of Myeloid Dendritic Cells during Advanced Stage of HIV-1 Infection: Role of Factors Regulating Cytokine Signaling. Sachdeva M, Sharma A and **Arora SK**. Plos One 2015; 10(10): e0140852. DOI:10.1371/journal.pone.0140852.
134. Combination of low producer AA-genotypes in IFN- $\gamma$  and IL-10 genes makes a high risk genetic variant for HIV disease progression. Singh S, Sharma A, and **Arora SK**. Cytokine 2015; 77:135-44.

135. Impact of Cytokine Gene Polymorphism on the HIV-1 Disease Progression and Response to Therapy. Singh S and Arora SK. *J AIDS Clin Res.* 2015, 6(10): 506. doi:10.4172/2155-6113.1000506.
136. Preproinsulin specific CD8+ T cells in subjects with latent autoimmune diabetes show lower frequency and different pathophysiological characteristics than those with type 1 diabetes. Sachdeva N, Paul M, Badal D, Kumar R, Jacob N, Dayal D, Bhansali A, **Arora SK**, Bhadada SK. *Clinical Immunology.* 2015; 157(1):78-90.
137. Dominating expression of negative regulatory factors MHC Class-II expression on dendritic cells in chronic Hepatitis C infection. Tomer S, Chawla YK, Duseja A, **Arora SK**. *Wolrd J Gastro* 2016; 22(22): 5173-5182. Doi:10.378/wjg.v22.i22.5173.
138. Leishmania recombinant antigen modulates macrophage effector function facilitating early clearance of intracellular parasites. Ratna A; **Arora SK**. *Trans Roy Soc Trop Med Hyg* 2016 110 (10): 610-619. doi: 10.1093/trstmh/trw068.
139. Differential sensitivity of HIV-1 isolates to inhibition by mannose-binding lectins reveals the heterogeneity of the virus envelope glycosylation. Jan M and Arora SK. *JAIDS* 2016; 71(97). P-D12 (DOI:10.1097/01.qai.0000479692.26227.99).
140. Increased expression of negative regulators of cytokine signaling during chronic HIV disease cause functionally exhausted state of Dendritic cells. Sachdeva M, Sharma A and Arora SK. *Cytokine* 91:118-123; 2017.
141. 68Ga-Pentixafor PET/CT demonstrating higher CXCR4 density in small cell lung carcinoma than in non-small cell variant. Baljinder Singh, Ankit Watts, Rajender Basher, Harmandeep Singh, Amanjit Bal, Rakesh Kapoor, Sunil K. Arora, Hans J. Wester, B. R. Mittal, D. Behera. *Eur J Nucl Med Mol Imaging*, 2017; 44:909-10. DOI 10.1007/s00259-017-3622-7.
142. Man $\alpha$ 1-2Man binding anti-HIV lectins enhance the exposure of V2i and V3 crown neutralization epitopes on the V1V2 and V3 hypervariable loops of HIV-1 Envelope. Jan M, Upadhyay C, Sharma A, Hioe CE, Arora SK. *AIDS Research and Human Retroviruses-* 2017 Sep;33(9):941-945. doi: 10.1089/AID.2016.0262..
143. N-glycan microheterogeneity of the HIV-1 envelope is involved in the determination of dendritic cell-specific ICAM-3 grabbing nonintegrin mediated trans-infection to T helper cells. Jan M, **Arora SK**. *JAIDS (supplement)*; Mar.2017.
144. Mo1421 Elevated Levels of IL-6 and IL-8 Predict Development of Respiratory Failure in Patients With Acute Pancreatitis. Samanta J, Singh S, Prasad R, **Arora SK**, Kochhar RK. *Gastroenterology* 150(4):S708 · April 2017
145. Efficacy and Safety of Mycobacterium indicus pranii as an adjunct therapy in Category II pulmonary tuberculosis in a randomized trial. Sharma SK, Katoch K, Sarin R, Raman. B, Jain N, Patel N, Ram J, Singla N, Saha PK, Singh U, Chaudhary S, Banavalikar JN, Jain N, Sumanlatha G, Khamar BM, Dey B, Mitra DK, **Arora SK**, Bhaskar S, Gupta S and Rani R. *Scientific Reports*, 28 Apr, 2017. | 7: 3354 | DOI:10.1038/s41598-017-03514-1.
146. Innate sensing of HIV-1 by DC-SIGN on Dendritic Cells: degradation and presentation vs. transmission of virus to T cells is determined by glycan composition of viral envelope. Jan M & **Arora SK**. *AIDS Res Human Retrovir.* 2017 Jul 27. doi: 10.1089/aid.2016.0290. [Epub ahead of print].
147.  $\alpha$ (1–6)-Fucosylated Complex Glycan-Binding Lentil Lectin Enhances In Vitro HIV-1 Infection and DC-SIGN-Mediated Viral Capture and Transmission to CD4 Cells. Jan M, Tomar S, Arora SK. *AIDS Res Hum Retro.* 2018; 34:641-44. DOI: 10.1089/aid.2018.0045.
148. Heterogeneity in the glycan composition on the surface of HIV-1 envelope determines the sensitivity to lectins. Jan M, Upadhyay C, Sharma A, Hioe CE, **Arora SK**. *PLoS One*, 2018 Mar 26;13(3):e0194498. doi: 10.1371/journal.pone.0194498. eCollection 2018
149. Monocyte Human Leukocyte Antigen - antigen D Related, Neutrophil Oxidative Burst and Cytokine analysis in patients of decompensated cirrhosis with and without acute-on chronic liver failure. Satsangi S, Duseja A, Sachdeva M, Tomer S, **Arora SK**, Taneja SK, Dhiman RK, Chawla YK. *PLoS One.* 2018 Jul 18;13(7):e0200644. doi: 10.1371/journal.pone.0200644. eCollection 2018.
150. Cancer Stem Cells: A Cause or A Consequence of Field Cancerization. Dhanota N & **Arora SK**. *Intern J Transl Res.* 2018; 1(1):14-16. (Editorial).
151. Chapter: HIV Virology, Immunology and Laboratory Diagnosis. **Arora SK** & Mehta G. *Infectious Disease & Your Health*. P.P.Singh (ed) ©Springer Nature Singapore Pte. Ltd. 2018; Chapter 2: 348-352.
152. Change in serum levels of inflammatory markers reflects response of percutaneous catheter drainage in symptomatic fluid collections in patients with acute pancreatitis. Mallick B, Tomer S,

- Arora SK**, Lal A, Dhaka N, Samanta J, Sinha SK, Gupta V, Yadav TD and Kochhar RK. J Gastro Hepatol, 2019; 1-7. doi:10.1002/jgh3.1215.
153. Cost of antiretroviral treatment for HIV patients in two centres of North India. Sharma A, Prinja S, Sharma A, Gupta A & **Arora SK**. Int J STD & AIDS 2019; 30(8):769-778. DOI: 10.1177/0956462419839852.
  154. Emerging strains of HIV-1 subtype C acquire multiple NF- $\kappa$ B binding sites in the LTR in co-infected individuals. Mehta G and **Arora SK**. Eur. J. Immunol 2019; 49, S3, (1236). P1558.
  155. Reversal of Endothelial Dysfunction Post-Immunosuppressive Therapy in Adult-Onset Podocytopathy And Primary Membranous Nephropathy. Inamdar N, Tomer S, Kalmath S, Bansal A, Yadav AK, Sharma V, Kohli HS, Gupta KL, **Arora SK**, Ramachandran R, Atherosclerosis 2020, 295:38-44. doi.org/10.1016/j.atherosclerosis.2019.08.013.
  156. Primary HIV Drug Resistance among Recently Infected Cases of HIV in North-West India Chauhan CK, Lakshami PVM, Sagar V, Sharma A, **Arora SK**, Kumar R. AIDS research and treatment 2019; 9:1-8. DOI: 10.1155/2019/1525646.
  157. Oral Nano Vit-D supplementation reduces disease activity in Ulcerative colitis. Ahamed ZR, Dutta U, Sharma V, Prasad KK, Popli P, Kalsi D, Vaishnavi C, **Arora SK**, Kochhar R. J Clin Gastro. 2019; 53(10):779-780. DOI: 10.1097/MCG.0000000000001233.
  158. A juggernaut of innate & adaptive immune cells in chronic hepatitis C. Tomer S and **Arora SK**. Ind J Med Res. 151(4):279-286. doi: 10.4103/ijmr.IJMR\_1387\_17.
  159. Signature genes associated with Immunological Non-responsiveness to Anti-retroviral therapy in HIV-1 infection. Singh S, Toor JS, Sharma A and **Arora SK**. Plos One 2020; 15(6): e0234270: 1-17. doi.org/10.1371/journal.pone.0234270 J.
  160. Prognostic role of Immune Cells in Hepatocellular Carcinoma. Sachdeva M & **Arora SK**. EXCLI Journal 2020;19:718-733. Doi: org/10.17179/excli2020-2438.
  161. Natural history and profile of selective cytokines in patients of acute pancreatitis with acute kidney injury. Prasad R, Muktesh G, Samanta J, Sarma P, Singh S, **Arora SK**, Dhaka N, Ramachandran R, Gupta V, Kant S and Kochhar RK. Cytokine 2020; 133:155177. doi.org/10.1016/j.cyto.2020.155177.
  162. Neutrophil dysfunction predicts 90-day survival in patients with acute on chronic liver failure: A longitudinal case-control study. Makkar K, Tomer S, Verma N, Rathi S, **Arora SK**, Taneja S, Duseja A, Chawla YK, Dhiman RK. J Gastro Hepat. 2020; 4:595-602. doi:10.1002/jgh3.12344.
  163. Using Immunological Markers for Identifying Recent HIV Infection in North-West India. Chauhan CK, Lakshami PVM, Sagar V, Sharma A, **Arora SK**, Kumar R. Indian J Med Res 2020; 153:227-233.
  164. Human Umbilical Cord derived Mesenchymal Stem Cells induce tissue repair and regeneration in collagen-induced arthritis in rats. Vohra M, Sharma A, Bagga R, **Arora SK**. J Clin Trans Res. 2020; 7(1): 6-19.
  165. Epitope based vaccine designing- A mini review. **Arora SK**, Arya A. Epitope Based Vaccine Designing- A mini review. J Vaccines Immunol 2020; 6(1): 038-041. DOI: <https://dx.doi.org/10.17352/jvi.000036>.
  166. In vitro and In vivo evaluation of genotoxicity of second-line antitubercular drug-loaded PLGA nanoparticles. Pandey A; Kumar R; Shafiq N; Kondel R; Garg S; Negi H; Arora SK; Varma N, Malhotra S. Hum Exp Toxicol 2020; 1-10. DOI: 10.1177/0960327120979345.
  167. Human Immunodeficiency virus-1 (HIV-1) subtype-C genetically diversify to acquire higher replication competence in human host with co-morbidities. Mehta G, Sharma A, Arora SK. AIDS Res Hum Retroviruses. 2021 Jan 7. doi: 10.1089/AID.2020.0118. Online ahead of print.
  168. Acquisition of additional NF $\kappa$ B binding sites in LTR of genetically evolving HIV-1 subtype C viral species in host with co-morbidities. Mehta G, Sharma A, Arora SK. AIDS Res Hum Retroviruses. 2021 Jan 13. doi: 10.1089/AID.2020.0195. Online ahead of print.
  169. Chapter: Glycans in the Host-Pathogen Interaction. 2021. Jan M and Arora SK. In 'The Glycome-Understanding the Diversity and Complexity of Glycobiology' Eds. Adeel Malik and Tanveer Dar. Apple Academic Press publications. ISBN: 9781771889971. Pp. 157-197.
  170. Glycan heterogeneity on HIV-1 Env decides the fate of virus within antigen presenting cells. Jan M and Arora SK. Int J AIDS, 2021; 3(1):100-106.
  171. A T-Cell Epitope-Based Multi-Epitope Vaccine Designed Using Human HLA Specific T Cell Epitopes Induces a Near-Sterile Immunity against Experimental Visceral Leishmaniasis in Hamsters. Arya A, Arora SK. Vaccines 2021, 9, 1058. <https://doi.org/10.3390/vaccines9101058>.
  172. Evaluation of breast cancer stem cells in human primary breast carcinoma and their role in aggressive behavior of the disease. Dhanota N, Bal A, Singh G, Arora SK. J Clin Trans Res. Sept. 7, 2021, 10.18053/Jctres/07.202105.008.



173. Chapter: HIV Virology, Immunology and Laboratory Diagnosis. Sunil K Arora and Gurleen Mehta. Chapter 2, Ed Alka Deshpande and Sanshya Kamath. API Textbook of Medicine. 12th Edn. 2022. Pp. 350-354.
174. Multidisciplinary and Integrated Treatment for Substance Use Disorders and Hepatitis C in an Addiction Treatment Service in India. Ghosh A, Mahintamani T, Premkumar M, Basu D, Singh V, Duseja A, Subodh BN, Mohindra R, Sharma A and Arora SK. Multidisciplinary and Integrated Treatment for Substance Use Disorders and Hepatitis C in an Addiction Treatment Service in India. Indian J Psychol Med. 2022; XX:1–5.
175. Indian patients with human immunodeficiency virus (HIV) infection have high prevalence but mild severity of non-alcoholic fatty liver disease (NAFLD)" has been successfully submitted online and is presently being given full consideration for publication in Tropical Doctor. De A; Duseja A; Badhala P; Taneja S; Sharma A; Arora SK. Diabetes & Metabolic Syndrome: Clinical Research & Reviews. 2022 Dec;16(12):102679. doi: 10.1016/j.dsx.2022.102679. Epub 2022 Nov 23.
176. Association of serotonin transporter promoter polymorphism (5-HTTLPR) with orocecal transit time in irritable bowel syndrome. Sikander A, Rana SV, Sinha SK, Prasad KK & Arora SK. Ind J Gastro. <https://doi.org/10.1007/s12664-022-01280-1>. Published online 27 Dec., 2022.
177. Mesenchymal Stem Cells- the master immunomodulators. Vohra M; Arora SK. Explor Immunol. 2023; 3:104–22 | <https://doi.org/10.37349/ei.2023.00092> .
178. A Phylogenomic Analysis of HIV Transmission Pattern among High Risk Groups of North-West India. Chauhan CK, Lakshmi PVM, Sarma P, Sagar V, Sharma A, Kumar R, Arora SK. J Clin Cell Immunol 2023; 14(3):1-7. DOI: 10.35248/2155-9899.23.14.689.
179. Christ Bearing the Cross: the original antigenic sin of the immune system and its potential role in emerging diseases. Ger Rijkers, Frans J. van Overveld. Qeios 2023 ID: UWC636. <https://doi.org/10.32388/UWC636>. Arora SK. Review on article published online 7th July, 2023. <https://doi.org/10.32388/X9UQJK>.
- 180.