

Bio-Data**Dr Rajpal Singh Kashyap**

Name: Rajpal Singh Kashyap

Present Position: Senior Research Consultant

Address: Central India Institute of Medical Sciences
88/2 Bajaj Nagar, Nagpur-440010.
Tel: 91-712-2236441, 2233381, Ext 262,263
Fax: 91-712-2236416

E-mail: raj_ciims@rediffmail.com
rashpal1@rediffmail.com

Date of Birth: 26th May 1972

Place of Birth: Nagpur, India

Sex: Male

Martial status: Married

Nationality: Indian

Languages: English, Hindi, Marathi, Gurmukhi as mother tongue.

Academic Qualifications:

- Bachelor in Science (Biochemistry, Microbiology, Chemistry) Nagpur University, 1995.
- Master in Science (Biochemistry), Nagpur University, 1998.
- BA (Addl), Nagpur University, 1997.
- Ph D (Biochemistry), Nagpur University, 2004

Thesis Topic: Development and evaluation of laboratory techniques for rapid diagnosis of tuberculous meningitis.

Teaching and Research Experience:

- ❑ Senior Research Consultant, Central India Institute of Medical Sciences, Biochemistry Research Laboratory, Nagpur 2007 – present
- ❑ Research Consultant, Central India Institute of Medical Sciences, Biochemistry Research Laboratory, Nagpur 2004 Sep – 2006.
- ❑ Research Officer, Central India Institute of Medical Sciences, Biochemistry Research Laboratory, Nagpur 2002-2004 Sep.
- ❑ Research fellow, Central India Institute of Medical Sciences, Biochemistry Research Laboratory, Nagpur 1998-2002.
- ❑ Visiting lecturer in Department of Biotechnology, Sindhu Mahavidyala, Nagpur University from July 2000 to March 2002.

- Course Co-ordinator: Workshop on techniques of Molecular and Immunological techniques. Department of Biotechnology, Sindhu Mahavidyala, Nagpur University 2002.
- Research fellow, UNICEF project, Control of Fluorosis, Nagpur 1998-1999.

Publications: 44

Central India Institute of Medical Sciences

Biochemistry Research Laboratory Publications

- Milind S Panchbhai, Rajpal S Kashyap, V. S. Agrawal, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **Evaluation of Quantiferon TB Gold Test for the diagnosis of latent and active tuberculosis. Accepted in International Journal of Biology, 2010.**
- Rajpal S Kashyap, Sonali M Saha, Hari M Gaherwar, Poonam S Deshpande, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **Evaluation of liquid culture for the identification of Mycobacterium tuberculosis from tuberculous meningitis CSF samples. Accepted in Indian Journal of Medical Microbiology, 2010.**
- Rajpal S Kashyap, Sonali M Saha, Khushboo J Nagdev, Sanjeevani S Kelkar, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **Diagnostic Markers for Tuberculosis Ascites: A Preliminary Study. Biomarker Insights, 2010, 5:87-94**
- Aliabbas A Hussain, Rajpal S Kashyap, Devanand R Kalorey, Shubhangi R Warke, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **Effect of repeat dose of BCG vaccine on humoral response in mice model. Accepted in Indian Journal of Experimental Biology, 2010.**
- Rajpal S Kashyap, Shweta H Morey, Nitin H Chandak, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **Detection of viral antigen, IgM and IgG antibodies in cerebrospinal fluid of Chikungunya patients with neurological complications. BMC, Cerebrospinal fluid research, 2010, 7:12.**
- Shweta H Morey, Rajpal S Kashyap, Hemant J Purohit, Girdhar M Taori and Hatim F Daginawala. **An approach towards peptide-based antibody detection for diagnosis of Chikungunya infection. Biomarkers journal, September 2010, 15(6):546-552.**
- Rajpal Singh Kashyap, Aliabbas A Husain , Shweta H Morey , Milind S. Panchbhai, Poonam S Deshpande, Hemant J Purohit, Girdhar M Taori, Hatim F Daginawala. **Assessment of immune response to repeat stimulation with BCG vaccine using invitro PBMC model. Journal of Immune based Therapies and Vaccine, 2010, 8:3.**
- Khushboo J. Nagdev, Rajpal S. Kashyap, Poonam S. Deshpande, Hemant J. Purohit, Girdhar M. Taori and Hatim F. Daginawala. **Determination of PCR efficiency for diagnosis of tuberculous meningitis in Chelex-100 extracted DNA samples. International Journal of Tuberculosis and Lung Diseases, August 2010, 14(8):1032-8.**
- Khushboo J. Nagdev, Rajpal S. Kashyap, Poonam S. Deshpande, Hemant J. Purohit, Girdhar M. Taori and Hatim F. Daginawala. **Comparative evaluation of a PCR**

- assay with an in-house ELISA method for diagnosis of Tuberculous meningitis.** Medical Science Monitor, 2010, **16**(6):289-295.
- Rajpal Singh Kashyap, Shweta H Morey , Sonali S Ramteke, , Nitin H Chandak, Manmohan Parida, Poonam S Deshpande, Hemant J Purohit, Girdhar M Taori, Hatim F Dagainwala. **Diagnosis of Chikungunya fever in an Indian population with an indirect ELISA protocol based on an antigen detection assay: A prospective cohort study.** Clinical and Vaccine Immunology, 2010, **17**(2):291-297.
 - Rajpal S. Kashyap, Poonam S. Deshpande, Sonali R. Ramteke, Milind S. Panchbhai, Hemant J. Purohit, Girdhar M. Taori, Hatim F. Dagainawala. **Changes in cerebrospinal fluid cytokine expression in Tuberculous Meningitis patients with treatment.** Journal of Neuroimmunomodulation, 2010, **17**(5):333-9.
 - Ravindra M. Satpute, Rajpal S Kashyap, Jayant Y Deopujari, Hemant J Purohit, Girdhar M Taori, Hatim F Dagainawala. **Protection of PC12 cells from chemical ischemia induced oxidative stress by *Fagonia arabica*.** Food Chem. Toxicol 2009 Nov, **47**(11):2689-95.
 - Nitin H. Chandak, Rajpal S. Kashyap, Dinesh Kabra, Poornima Karandikar, Sonali M. Saha, Shweta H. Morey, Hemant J. Purohit, Girdhar M. Taori, Hatim F. Dagainawala. **Neurological complications of chikungunya virus infection.** Neurology India, 2009, **57**(2):177-180.
 - Amit R Nayak, Rajpal S Kashyap, Hemant J Purohit, Dinesh Kabra, Girdhar M Taori, Hatim F Dagainawala. **Evaluation of the inflammatory response in sera from acute ischemic stroke patients by measurement of IL-2 and IL-10.** Inflammation Research 2009 Oct, **402**(1-2):687-91.
 - Rajpal S Kashyap, Sonali S Ramteke, Shweta H Morey, Hemant J Purohit, Girdhar M Taori, Hatim F Dagainawala. **Diagnostic value of early secreted antigenic target-6 (esat-6) for diagnosis of tuberculous meningitis patients.** Infection, 2009, **37**:508-513.
 - Rajpal S Kashyap, Amit R Nayak, Poonam S Deshpande, Dinesh Kabra, Hemant J Purohit, Girdhar M Taori, Hatim F. Dagainawala. **Inter- α -trypsin inhibitor heavy chain 4 is a novel marker of acute ischemic stroke.** Clin Chem Acta 2009, **402**:160-163.
 - Khushboo J Nagdev, Poonam S. Deshpande, Rajpal S. Kashyap, Hemant J. Purohit, Girdhar M. Taori, Hatim F. Dagainawala. **Evaluation of nested PCR along with other laboratory techniques for the diagnosis of Pleural tuberculosis.** IJIB 2008, **4**:28-33.
 - Amita Limaye, Rajpal S Kashyap, Atya Kapley, Sanjeev Galande, Hemant J Purohit, Hatim F Dagainawala, Girdhar M Taori. **Modulation of signal transduction pathways in lymphocytes due to sub-lethal toxicity of chlorinated phenol.** Toxicology Letters 2008, **179**:23-28.
 - Nayak AR, Kashyap R.S, Deshpande PS, Purohit H.J, Taori G.M and Dagainawala H.F. **Identification of protein(s) in ischemia induced PC12 cells after induction with conditioned media of IMR-32 and U87mg cells.** Advances in Biological Research 2007, **1**(3-4):118-121.
 - Prasad S, Kashyap R.S, Deopujari J.Y, Purohit H.J, Taori G.M and Dagainawala H.F. **Effect of *Fagonia arabica* (Dhamasa) on in vitro thrombolysis.** BMC Complementary and Alternative Medicine, 2007, **7**:36. (06-09-2007)
 - Deshpande PS, Kashyap R.S, Ramteke SS, Nagdev KJ, Purohit HJ, Taori GM and Dagainawala HF. **Evaluation of the IS6110 PCR assay for the rapid Diagnosis of tuberculous meningitis.** BMC, Cerebrospinal fluid research 2007, **4**:10. (02-09-2007)
 - Kashyap R.S, Deshpande PS, Nayak AR, Purohit HJ, Taori GM and Dagainawala HF. **Adenosine deaminase activity in the supernatant of monocytes infected with mycobacterium tuberculosis.** IJIB 2007, **1**(2):61-64. (02-09-2007)

- Kashyap R.S, Ramteke SS, Deshpande PS, Purohit HJ, Taori GM and Dagainawala HF. **Comparison of adenosine deaminase assay with ELISA for the diagnosis of tuberculous meningitis infection.** *Medic. Sci. Monit.* 2007; **13**(9). (03-09-2007)
- Kashyap R.S, Rajan A. N, Ramteke S.S, Agrawal V.S, Kelkar S.S, Purohit, H.J Taori G.M and Dagainawala H.F . **Diagnosis of tuberculosis in an Indian population by an indirect ELISA protocol based on detection of Antigen 85 complex: a prospective cohort study.** *BMC Infectious Diseases* 2007, **7**:74. (10 July 2007)
- Kashyap R.S, Kainthla R.P, Purohit H.J, Taori G.M and Dagainawala H.F. **Tuberculosis meningitis in patients without systemic focus of miliary tuberculosis.** *American-Eurasian Journal of Scientific Research* 2007, **2**(1):33. (June 2007)
- Rajan A. N., Kashyap R.S, Purohit H.J, Taori G.M and Dagainawala H.F. **Serodiagnosis of tuberculosis based on the analysis of 65 kD heat shock protein of Mycobacterium tuberculosis.** *Int. J Tuberc. Lung Dis.* 2007, **11**(7):1-6
- Kainthla R.P, Kashyap R.S, Deopujari J.Y, Purohit H.J, Taori G.M and Dagainawala H.F. **Study of interaction between cyclosporine A and herbal extracts on in vitro cultured human T-cells.** *Journal of Cell and Tissue Research*, 2007, **7** (1); 877-880
- Kainthla R.P, Kashyap R.S, Sweta Prasad, Deopujari J.Y, Purohit H.J, Taori G.M and Dagainawala H.F. **Evaluation of Adenosine Deaminase assay for analyzing T lymphocyte density in vitro. In vitro cell dev.** *Biol – animal* 2006, **42**:287-289.
- Mudaliar A.V, Kashyap R.S, Purohit H.J, Taori G.M and Dagainawala H.F. **Detection of 65kD heat shock protein in cerebrospinal fluid of tuberculous patients.** *BMC Neurology*, September 2006, **6**:34.
- Prasad S, Kashyap R.S, Deopujari J.Y, Purohit H.J, Taori G.M and Dagainawala H.F. **Development of an in vitro model to study clot lysis activity of thrombolytic drugs.** *BMC Thrombosis*, September 2006, **4**:14.
- Kashyap R.S, Kabra D.P, Nayak A.R, Mishra R.A, Deshpande S.K, Karandikar P.N, Purohit H.J., Taori G.M and Dagainawala H.F. **Protein electrophoretogram in serum of Acute Ischemic Stroke patients & its correlation with S-100 BB and Neuron Specific Enolase level: A pilot study.** *Annals of Neurosciences*, 2006, **13**; 36-40.
- Kainthla R.P, Kashyap R.S, Deopujari J.Y, Purohit H.J, Taori G.M and Dagainawala H.F. **Effect of Hemidesmus indicus (Anantmoool) extract on IgG production and adenosine deaminase activity of human lymphocytes in vitro.** *Indian J Pharmacol.*, 2006, **38**; 190-193.
- Satpute R.M, Kashyap R S, Kainthla R.P, Purohit H.J, Taori G.M and Dagainawala H.F **Secretory Factors of Human Neuroblastoma (IMR-32) and Human Glioblastoma (U87MG) cell lines induce neurite outgrowths in PC12 cells.** *Indian Journal of Experimental Biology*, 2006, **44**; 367-370.
- Kashyap R.S, Kainthla R.P, Mudaliar A.V, Purohit H.J, Chandak N, Taori G.M and Dagainawala H.F. **Cerebrospinal fluid adenosine deaminase: A complimentary tool in the early diagnosis of Tuberculosis meningitis.** *Cerebrospinal Fluid Research*, 2006, **3**:5.
- Kashyap RS, Dobos KM, Belisle JT, Purohit HJ, Chandak NH, Taori GM, Dagainawala HF. **Demonstration of components of antigen 85 complex in CSF of Tuberculous meningitis patients.** *Clinical Diagn Lab Immuno* 2005; **12**: 752-758
- Kashyap R.S, Kainthla R.P, Satpute R.M, Agarwal N, Purohit H.J, Chandak N, Taori G.M and Dagainawala H.F. **Differential Diagnosis of Tuberculous Meningitis from partially treated cases of pyogenic meningitis by Cell ELISA.** *BMC Neurology* 2004, **4**: 16
- Kashyap R.S, Kainthla R.P, Satpute R.M, Purohit H.J, Chandak N, Taori G.M and Dagainawala H.F. **Demonstration of IgG antibodies to 30kD protein antigen in CSF for diagnosis of TBM by antibody capturing ELISA.** *Neurology India* 2004, **52**(3); 359-362.

- Kashyap R.S, Kainthla R.P, Biswas S.K, Purohit H.J, Chandak N, Agarwal N, Taori G.M and Daginawala H.F. **Rapid diagnosis of tuberculous meningitis using the simple Dot ELISA method.** Med. Sci. Monit.2003, **9** (11); 123-126.
- Kashyap R.S, Biswas S.K, Purohit H.J, Chandak N, Agarwal N, Taori G.M and Daginawala H.F. **Application of Mancini technique as diagnostic test in CSF of Tuberculos meningitis patients.** Med Sci.Monit. 2002, **8** (6); 95-98.
- Kashyap R.S, Biswas S.K, Purohit H.J, Chandak N, Agarwal N, Taori G.M and Daginawala H.F. **Significance of 30kD protein as a diagnostic marker in CSF of Tuberculous meningitis.** Ann.Ind.acad.Neurol. 2001, **4**; 197-201.
- Deshkar S, Biswas SK, Appulingam S, Chavan S.M **Kashyap RS**, Bandopadhyia SS & Deshmukh NN. **Biological impact of high fluoride environment in fluorosis affected subjects of dhoptala Village.** Environmental Geochemistry, Vol 1, No. 1,25-28,1998.
- Deshkar S, Biswas SK, Appulingam S, Chavan S.M **,Kashyap RS**, Bandopadhyia SS & Deshmukh NN. **Biochemical assessment of humans and albino rats subjected to high fluoride.** Environment. Gond. Geol. Magz. Vol.3, 1998.

Laboratory Techniques:

- Immunological techniques
- Electrophoresis
- Chromatography
- Spectroscopy
- Centrifugation
- Biochemical techniques
- Tissue Culture
- Flow Cytometer
- Antibody Raising

Area of Research:

- Immunodiagnostic
- Infectious diseases
- Proteomics
- Neurology

Scientific Affiliations:

I am a member of the following learned societies:

- Japan Neuroscience Society
- International Brain Research Organization
- Indian Immunology Society (India)
- Society of Biological Chemist (India)
- Indian Academy of Neurosciences (India)
- Association of Clinical Biochemistry of India (India)
- Society for Neurochemistry of India

Editorial Board Member and Reviewer of the following journal

- Clinical and Vaccine Immunology
- Asian Journal of Biochemistry
- Current Research in Tuberculosis
- Journal of Biological Sciences
- Journal of Medical Sciences
- Research Journal of Microbiology
- Trends in Medical Research

- Indian journal of Medical Sciences

Ph.D Supervisor in Biochemistry:

Nagpur University, Faculty of Science, Biochemistry

Ph.D Supervisor in Microbiology:

Nagpur University, Faculty of Science, Microbiology

Ph.D Supervisor in Clinical Biochemistry & Microbiology and Medical Biotechnology

Datta Meghe Institute Of Medical Sciences University, Clinical Biochemistry and Clinical Microbiology.

Principal Investigator:

Research project sanctioned by Indian Council of Medical Research, Government of India on: Study of heat shock proteins and cytokines in diagnosis and pathogenesis of Tuberculous meningitis. (5/8/5/1/2007-ECD-I)

Research project sanctioned by Department Of Biotechnology, Government of India on: Development of Immunological test for early diagnosis of Chikungunya Viral Infection. (BT/PR9103/MED/29/06/2007)

Research project sanctioned by Department of Science & technology, Government of India on: Diagnostic value of 30 KD protein comprising of Ag 85 complex in extra CNS tuberculosis. (Project no. SR/FT/L-30/2005). *Completed*

Award/Prize/Certificate:

- Best paper award for Diagnostic value of 30 Kd protein in tuberculosis. National Symposium on recent advances in science: A prospective.2005.Dehradun, India
- Recipient of Moulanan Mohammed Ali Zohar Memorial Award 2006 in the field of Medical Sciences
- Sikh Education Society Appreciation award for excellence in Medical Sciences
- Travel award from Department of Biotechnology to attend international conference on tuberculosis in Gambia, West Africa. (2006)
- Japan Neuroscience Travel Award to attend The 30th Annual Meeting of Japan Neuroscience Society (JNS) in Japan (September 2007)
- Global Health Award (Bill and Melinda Gates foundation) to attend Challenges of Global Vaccine Development (T1) October 8 - 13, 2007, Cape Town, South Africa.
- Japan Neuroscience Travel Award to attend The 31 th Annual Meeting of Japan Neuroscience Society (JNS) in Tokyo, Japan (July 2008)
- Welcome trust travel award to attend tuberculosis conference (Keystone Symposium) Thailand, Bangkok, 2009

Experience of Directing Research Work for MSc Dissertation:

Number of students: **55**

Experience of Directing Research Work for Ph.D degree:

Number of students: **06**

Conference papers presented in National and international conferences: 92

International Conference

1. 2006 Tuberculosis 2006 international Conference and Workshop, April 21st -May 1st ,Kololi,Gambia, **2006, West Africa.**
2. 2006 The 29th Annual Meeting of the Japan Neuroscience Society, July 19-21, Japan Neuroscience Society, Kyoto,**Japan.**
3. **Kashyap RS et al (2007).** Identification & characterization of protein marker (s) for diagnosis and prognosis of acute ischemic stroke patients. *The 30th Annual Meeting of the Japan Neuroscience Society, September 10-12, Japan Neuroscience Society, Pacifico Yokahama, Tokyo, Japan.*
4. **Kashyap RS et al (2007).** Heterologous prime-boost immunization approach using a Ag 85 complex and BCG in PBMC model to improve the efficacy of vaccine in TB. “Challenges of Global Vaccine Development”, October 8 – 13, *Keystone symposia, Cape Town Conference Centre, Cape Town, South Africa.*
5. **Kashyap RS et al (2008).** Evaluation of inflammatory response in the serum sample of acute ischemic stroke patients.. *The 31st Annual Meeting of the Japan Neuroscience Society, July 10-12, Japan Neuroscience Society, Tokyo International Forum, Tokyo, Japan.*
6. Kashyap RS (2009).CIIMS approaches for TBM diagnosis.(Keystone Symposium) Bangkok, **Thailand,**

Training Courses Attended:

- Course on Immunodiagnosics for Infectious diseases, MGIMS. Sewagram, Wardha, India. Feb 25 to Mar 2, **2001.**
- Training on Animal Cell Tissue Culture, National Institute of Virology, Pune, India. Dec 10-24, **2002.**
- Summer course on Electrophoresis Techniques, Electrophoresis Institute, Yercaud, Salem, India. May 4-14, **2004.**

Indian Patent : 3

- Process for preparation of 30 Kd Protein antigen/antibody useful as marker for tuberculous meningitis in CSF (Part of Ph D thesis) (**91/mum/2004**).
- Patent granted on a development of diagnostic kit pulmonary and other extra Central Nervous system tuberculosis using 30 kDa antigen comprising of Ag 85 complex.(**522/mum/2005**)
- Patent granted on in vitro clot lysis (**1306/mum/2006**)

Current projects:

- Development of immunological test for early diagnosis of Chikungunya (CHIKV) infection.
- Peptide based diagnosis of CHIKV infection
- Development of Diagnostic kit for Dengue.
- Clinical application of ITIH 4 (Inter-Alpha Trypsin Inhibitor Heavy Chain 4) protein identified in serum specimen of acute ischemic stroke patients.
- Proteomic approaches in serum/CSF samples of acute ischemic strokes
- Protein expression using one-dimensional PAGE was studied with PC-12 cell line after induction of ischemia and after treatment with conditioned media of IMR-32 and U87MG

- Biomarkers in latent infection
- Biomarkers in TB infection (with follow up study)
- Development of rapid method for diagnosis of pulmonary and extrapulmonary tuberculosis (including brain, abdomen and spine tuberculosis).
- Development of ayurvedic herbs for clot lysis
- Role of 65 kDa heat shock protein (Rv 0440) in diagnosis and pathology of tuberculosis.
- Booster doses of BCG vaccine: experimental approach with PBMC model.
- Adenosine deaminase kit for diagnosis of tuberculosis.

Diagnostic kits developed

- ELISA Based diagnostic kit was developed for brain tuberculosis and other tuberculosis; it is being used in India, and Africa. This kit is useful for developing and underdeveloped countries with low income.
- Adenosine deaminase kit for diagnosis of tuberculosis.
- ELISA based Chikungunya diagnostic kit.
- Multiplex ELISA for TB