

Scientist Profile

1. Name: **Dr. Geetha Ramachandran**
2. Designation: **Scientist 'C'**
3. Date of Birth: 20 December, 1957
4. Date of Joining: 29 August, 1985
5. Date of joining present post: 01 August, 2007
6. Discipline: Biochemistry
7. Address (off.): Department of Biochemistry, National Institute for Research in Tuberculosis, Mayor VR Ramanathan Road, Chetpet, Chennai -600 031
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11. Email address: geetha202@rediffmail.com; geethar@trcchennai.in
12. Educational Qualifications: **M.Sc (Biochemistry), Ph.D (Life Science)**
13. Research Experience: 26 years; Biochemistry & Clinical Pharmacology
Primarily responsible in establishing antiretroviral drug estimations at the centre, and instrumental in initiating several pharmacokinetic studies of anti-TB and antiretroviral drugs
14. Membership/Fellowship of Professional Societies/Associations : Nil
15. Workshops/Conferences/Symposiums:
 1. Presented the paper titled "Pharmacokinetics of rifampicin, ethambutol, isoniazid and pyrazinamide following administration of the drugs individually or in different combinations in healthy subjects" at the National Congress on Diseases of the Chest held at Chennai during February 1997 (Awarded a cash prize for best presentation)
 2. Presented the paper titled " Mechanism of drug resistance in *M.tuberculosis* with reference to Cytochrome P-450" at the 54th National Conference on TB and Chest Diseases held at Patna during December 1999
 3. Attended the ICMR/WHO Workshop on "Use of Information Technology (IT) in Biomedical Research" held at Chennai during August 2001

4. Participated in a Training Programme on "Bioavailability Studies of Anti-TB drugs" at The National Institute of Pharmaceutical and Education Research, Chandigarh during October 2002
5. Attended the Workshop in Clinical Pharmacology conducted by KEM Hospital, Mumbai during April 2003
6. Was awarded a Fogarty Fellowship to undergo training on "Pharmacology of antiretroviral drugs" at the Tufts University School of Medicine, Boston, USA during August-December 2003
7. Presented the paper titled "Vitamin A levels in sputum positive pulmonary tuberculosis patients" at the 58th National Conference on TB and Chest Diseases held at Mumbai during January 2004 (Bagged the C. Srinivasa award for the best paper in tuberculosis for the year 2003)
8. Poster presentation of paper titled "Analysis of generic antiretroviral medications manufactured in India" at the 11th Conference on Retroviruses and Opportunistic infections held at San Francisco, USA during February 2004
9. Underwent training in "Screening for Cytochrome P450 polymorphisms by RFLP" at the Dept. of Hematology, Christian Medical College, Vellore during September 2005
10. Participated in a TRC/ICER/UAB workshop on Good Laboratory Practices held at Chennai during November 2005
11. Poster presentation of paper titled 'Pharmacokinetic interactions between nevirapine and rifampicin: Comparison of blood and urine nevirapine' at the Seventh Sir Dorabji Tata Symposium – HIV/AIDS Research issues held at Bangalore during March 2006
12. Poster presentation of paper titled 'Influence of CYP2B6 polymorphism on plasma efavirenz and nevirapine concentrations in HIV-infected patients in south India' at the 14th Conference on Retroviruses and Opportunistic Infections held at Los Angeles, USA during February 2007
13. Underwent training on the theoretical and practical aspects of Liquid Chromatography-Mass Spectrometry held in the Shimadzu laboratory at Mumbai during June 2007
14. Underwent additional training in Clinical pharmacology of antiretroviral drugs at the Tufts University School of Medicine, Boston under the Fogarty AITRP during Aug – Dec 2007
15. Presentation of an overview of Clinical Pharmacology studies at the Research Dissemination Workshop on Clinical, Behavioural & Pharmacokinetic studies jointly organized by TRC & TNSACS held at Chennai during May 2009
16. Presented a paper titled "Impact of HIV infection on the Pharmacokinetics of anti-TB drugs" at the 64th National Conference on Tuberculosis & Chest Diseases held at Kolkata during December 2009
17. Delivered guest lecture at the Department of Biochemistry, Mohamed Sathak College, Chennai during January 2009
18. Invited speaker at the National Seminar on Enzyme Technology at GR Damodharan College of Science, Coimbatore during February 2009
19. Oral presentation of study titled "Pharmacokinetics of anti-TB drugs in children" at the Third International Workshop on Clinical Pharmacology of Tuberculosis Drugs

- at Boston during Sept 2010 (trip was sponsored by the Fogarty program, Brown/Tufts University, USA)
20. Invited by NACO to present the Clinical Pharmacology studies undertaken at TRC at the National Conference on HIV/AIDS held in New Delhi during Jan 2011
 21. Invited talk at the National Symposium on Therapeutic Drug Monitoring organized by CMC, Vellore, held in Vellore during Feb 2011

16. Awards:

- (i) Best presentation award for the paper titled "Pharmacokinetics of rifampicin, ethambutol, isoniazid and pyrazinamide following administration of the drugs individually or in different combinations in healthy subjects" presented at the National Congress on Diseases of the Chest held at Chennai during February 1997
 - (ii) Won the C. Srinivasa award for the best paper in tuberculosis for the year 2003 at the 58th National Conference on TB and Chest Diseases held at Mumbai during January 2004.
17. Miscellaneous: (i) Member secretary, Annual report committee of the Centre
- (ii) Member, Research Committee of the Centre
 - (iii) Member of the Committee constituted to prepare the 12th Plan document

18. Publications

1. Factors influencing plasma nevirapine levels: a study in HIV-infected children on generic antiretroviral treatment in India
Soumya Swaminathan, **Geetha Ramachandran**, Hemanth Kumar AK, Vasantha M, Lakshmi S, Bhavani PK, Poorana Ganga Devi N, Ira Shah, Ramesh K, Rajasekaran S. *J Antimicrob Chemother* 2011; 66: 1354-59.
2. Pharmacokinetics of anti-tuberculosis in children
Geetha Ramachandran, AK Hemanth Kumar, Soumya Swaminathan
Indian J Pediatr 2011; 78 (4): 438-442.
3. Dyslipidemia among HIV-infected patients with tuberculosis taking once-daily nonnucleoside reverse-transcriptase inhibitor-based antiretroviral therapy in India
Chandrasekaran Padmapriyadarsini, S. Ramesh Kumar, Norma Terrin, Gopalan Narendran, Pradeep A Menon, **Geetha Ramachandran**, Sudha Subramanyam, Perumal Venkatesan, Christine Wanke, Soumya Swaminathan. *Clin Infect Dis* 2011; 52: 540-546.
4. Plasma efavirenz in HIV-infected children treated with generic antiretroviral drugs in India
Geetha Ramachandran, AK Hemanth Kumar, M Vasantha, Ira Shah, Soumya Swaminathan. *Indian Pediatr* 2010; 47: 890-1.

5. Comparison of HPLC and spectrophotometric methods for estimation of antiretroviral drug content in pharmaceutical products
AK Hemanth Kumar, V Sudha, Soumya Swaminathan, **Geetha Ramachandran**. *Indian J Med Res* 2010; 132: 390-4.
6. Dose adjustment of the non-nucleoside reverse transcriptase inhibitors during concurrent rifampicin-containing tuberculosis therapy: one size does not fit all
Awewura Kwara, **Geetha Ramachandran**, Soumya Swaminathan. *Exp Opin Drug Metab Toxicol* 2010; 6(1): 55-68.
7. Pharmacokinetics of lamivudine and stavudine in generic fixed-dose combinations in HIV-1 infected adults in India
AK Hemanth Kumar, **Geetha Ramachandran**, S Rajasekaran, C Padmapriyadarsini, G Narendran, S Anitha, Sudha Subramanyam, V Kumaraswami, Soumya Swaminathan. *Indian J Med Res* 2009;130: 451-7.
8. Simple and rapid liquid chromatography method for determination of moxifloxacin in plasma
AK Hemanth Kumar, **Geetha Ramachandran**. *J Chromatogr B Analyt Technol Biomed Life Sci*, 2009; 877: 1205-8.
9. CYP2B6 G516T polymorphism but not rifampin co-administration influences steady state pharmacokinetics of efavirenz in human immunodeficiency virus-infected patients in south India
Geetha Ramachandran, AK Hemanth Kumar, Sikhamani Rajasekaran , P Kumar, K. Ramesh, S Anitha, G Narendran, Pradeep Menon, C Gomathi, Soumya Swaminathan. *Antimicrob Agents Chemother* 2009; 53: 863-8.
10. Association of high T-allele frequency of CYP2B6 G516T polymorphism among ethnic south Indian HIV-infected patients with elevated plasma efavirenz and nevirapine
Geetha Ramachandran, Karunaianandham Ramesh, Agibothu K Hemanthkumar, Ishaan Jagan, Mahalingam Vasantha, Chandrasekaran Padmapriyadarsini, Gopalan Narendran, Sikhamani Rajasekaran, Soumya Swaminathan. *J Antimicrob Chemother* 2009; 63: 841-3.
11. Single dose pharmacokinetics of lamivudine in healthy volunteers: comparison of blood and urine kinetics
Ramachandran G, Hemanth Kumar AK, Venkatesan V, Anitha S, Tharani CB, Kumaraswami V, Swaminathan S. *SAARC J TB, Lung diseases & HIV/AIDS* 2008; V (2): 5-8.
12. Pharmacokinetics of rifampicin during antiretroviral treatment with non- nucleoside reverse transcriptase inhibitors

Hemanth Kumar AK, **Ramachandran G**, Rajasekaran S, Padmapriyadarsini C, Narendran G, Menon P, Narayanan PR, Swaminathan S. *SAARC J TB, Lung diseases & HIV/AIDS* 2008; V (2): 1-4.

13. Study of ABCB1 polymorphism C3435T in HIV-1 infected –individuals in south India
Siddharth Bakshi, **Geetha Ramachandran**, K.Ramesh, AK Hemanthkumar, S.Anitha, C Padmapriyadarsini, G Narendran, Pradeep Menon, S Rajasekaran, S Anitha, V Kumaraswami, Soumya Swaminathan. *Br J Clin Pharmacol* 2008; 65: 791-2.
14. Single dose pharmacokinetics of efavirenz in healthy Indian subjects
Geetha Ramachandran, AK Hemanth Kumar, B.Sukumar, V.Kumaraswami, Soumya Swaminathan. *SAARC J TB, Lung diseases & HIV/AIDS* 2007; IV (1): 38-43
15. Effect of anticoagulants on plasma efavirenz and nevirapine
AK Hemanth Kumar, **Geetha Ramachandran**, P Kumar, S Anitha, S Rajasekaran, Soumya Swaminathan. *Ther Drug Monit* 2007; 29: 652-4.
16. Steady state pharmacokinetics of nevirapine in HIV-1-infected adults in India
Geetha Ramachandran, AK Hemanthkumar, S Rajasekaran, C Padmapriyadarsini, G Narendran, S Anitha, V Kumaraswami, Soumya Swaminathan. *J Intl Assoc Phy AIDS Care* 2007; 6(4): 251-4.
17. Urinary levels of isoniazid and rifampicin in asymptomatic HIV-positive individuals
Geetha Ramachandran, AK Hemanth Kumar, K.Sarala, C.Padmapriyadarsini, S.Anitha, CB Tharani, V.Kumaraswami, Soumya Swaminathan. *Indian J Med Res* 2007; 125: 763-6.
18. Can urine lamivudine predict antiretroviral adherence?
AK Hemanth Kumar, **Geetha Ramachandran**, P.Kumar, V.Kumaraswami Soumya Swaminathan. *Medscape General Medicine*. 2006; 8(4): 53 Available at: <http://www.medscape.com/viewarticle/546807>.
19. Simple liquid chromatography method for simultaneous determination of zidovudine and nevirapine in plasma
Geetha Ramachandran, AK Hemanth Kumar, V.Kumaraswami, Soumya Swaminathan. *J Chromatogr B Analyt Technol Biomed Life Sci* 2006; 843: 339-44.
20. Urine nevirapine as a predictor of antiretroviral adherence
AK Hemanth Kumar, **Geetha Ramachandran**, Banu Sharadha, G.Narendran, Soumya Swaminathan. *Indian J Med Res* 2006; 123: 565-8.
21. Increasing nevirapine dose overcomes decreased bioavailability due to rifampicin co-administration

- Geetha Ramachandran**, AK Hemanth Kumar, S.Rajasekaran, C.Padmapriyadarsini, G.Narendran, B.Sukumar, S.Satishnarayan, K.Raja, V.Kumaraswami, Soumya Swaminathan. *J Acquir Immun Defic Syndr* 2006; 42(1): 36-41.
22. Simple and rapid liquid chromatography method for determination of efavirenz in plasma
Geetha Ramachandran, AK Hemanth Kumar, Soumya Swaminathan, P.Venkatesan, V.Kumaraswami, D.J.Greenblatt. *J Chromatogr B Analyt Technol Biomed Life Sci* 2006; 835: 131-5.
23. Pharmacokinetics of isoniazid and rifampicin in patients with renal failure undergoing continuous ambulatory peritoneal dialysis
Geetha Ramachandran, AK Hemanth Kumar, Prema Gurumurthy, Prakash KC, Venkatesan P, Bose SC, Manjula Datta. *SAARC J TB, Lung diseases & HIV/AIDS* 2005; II (2): 23-7.
24. Acetylator status influences bioavailability of isoniazid in patients with advanced HIV disease
Geetha Ramachandran, AK Hemanth Kumar, S Rajasekaran, C Padmapriyadarsini, Soumya Swaminathan, P Venkatesan, L Sekar, Prema Gurumurthy. *SAARC J TB, Lung diseases & HIV/AIDS*, 2005; II (2): 9-12.
25. Effect of HIV on pharmacokinetics of anti-tuberculosis drugs
Geetha Ramachandran, AK Hemanth Kumar, Prema Gurumurthy, S Rajasekaran, C Padmapriyadarsini, S Bhagavathy, P Venkatesan, L Sekar, Soumya Swaminathan. *Contagion* 2005; 2: 182-3.
26. Decreased bioavailability of rifampin and other anti-TB drugs in patients with advanced HIV disease
Prema Gurumurthy, **Geetha Ramachandran**, Hemanth Kumar AK, Rajasekaran S, Padmapriyadarsini, Soumya Swaminathan, Bhagavathy S, Venkatesan P, Sekar L, Mahilmaran A, Ravichandran N, Paramesh P *Antimicrob Agents Chemother* 2004; 48: 4473-5.
27. Analysis of generic antiretroviral medications manufactured in India
G. Ramachandran, E.S. Perloff, L.L von Moltke, S. Swaminathan, C Wanke, D J Greenblatt. *AIDS* 2004; 18: 1482-4.
28. Vitamin A levels in sputum positive pulmonary TB patients in comparison with household contacts and healthy 'normals'
Geetha Ramachandran, Santha T, Renu Garg, Baskaran D, Sheik Illias, Venkatesan P, Fathima Rehman, Narayanan PR. *Int J Tuberc Lung Dis* 2004; 8: 1130-3.

29. Malabsorption of rifampin and isoniazid in HIV infected patients with and without tuberculosis
Prema Gurumurthy, **Geetha Ramachandran**, Hemanth Kumar AK, Rajasekaran S, Padmapriyadarsini, Soumya Swaminathan, Venkatesan P, Sekar L, Kumar S, Krishnarajasekhar OR, Paramesh P. *Clin Infect Dis* 2004; 38: 280-3.
30. A validated high performance liquid chromatography method for the determination of rifampicin and desacetyl rifampicin in plasma and urine
Hemanth Kumar AK, Chandra Immanuel, **Geetha Ramachandran**, Silambu Chelvi K, Lalitha Victor and Prema Gurumurthy. *Ind J Pharmacol* 2004; 36: 231-3.
31. Bioavailability of rifampicin following concomitant administration of ethambutol or isoniazid or pyrazinamide or a combination of the three drugs
Chandra Immanuel, Prema Gurumurthy, **Geetha Ramachandran**, Venkatesan P, Chandrasekaran V, Prabhakar R. *Indian J Med Res* 2004; 118: 109-14.
32. Effect of rifampicin and isoniazid on Cytochrome P-450 in mycobacteria
Geetha Ramachandran, Prema Gurumurthy. *Indian J Med Res* 2002; 116: 140-4.
33. Purification of Cytochrome P-450 in mycobacteria
Geetha Ramachandran, Prema Gurumurthy. *Curr Science* 2002; 83: 873-7.
34. Identification of a novel mycobacterial transcriptional regulator and its involvement in growth rate dependence and stringent control
Kamalakaran V, **Geetha Ramachandran**, Sujatha Narayanan, Vasan SK, Narayanan PR. *FEMS Microbiol Lett* 2002; 209: 261-6.
35. Cytochrome P-450 in drug-resistant *M. tuberculosis*
Geetha Ramachandran, Prema Gurumurthy, Narayanan PR, Usha Mahadevan. *Curr Science* 1999; 76 (9): 1231-4.
36. Bioavailability of rifampicin, isoniazid and pyrazinamide in triple drug formulation: comparison of plasma and urine kinetics
Gurumurthy P, **Ramachandran G**, Vijayalakshmi S, Hemanth Kumar AK, Venkatesan P, Chandrasekaran V, Vijayasekaran V, Kumaraswami V, Prabhakar R. *Int J Tuberc Lung Dis* 1999; 3: 119-25.
37. Simple spectrofluorimetric and microbiological assay methods for the estimation of ofloxacin in biological fluids
Prema Gurumurthy, **Geetha Ramachandran**, Hemanth Kumar AK, Venkatesan P, Chandrasekaran V and Narayanan PR. *Ind J Pharmacol* 1998; 30: 263-6.
38. Effect of administration of rifampicin on the adrenocortical function in patients with pulmonary tuberculosis
Raghupati Sarma G, Chandra Immanuel, Krishnamurthy PV, Rani Balasubramaniam, **Geetha Ramachandran**, Prabhakar R. *Ind J Tub* 1992; 39: 21.

39. Salivary cortisol in the assessment of adrenocortical function in patients with pulmonary tuberculosis
Chandra Immanuel, Raghupati Sarma G, Krishnamurthy PV, **Geetha Ramachandran**, Kumaraswami V. *Indian J Med Res* 1992; 95: 1-7.
40. Adrenocortical function in patients with pulmonary tuberculosis
Raghupati Sarma G, Chandra Immanuel, **Geetha Ramachandran**, Krishnamurthy PV, Kumaraswami V, Prabhakar R. *Tubercle* 1990; 71: 277-82.