

Dr. A.K. Hemanth Kumar

CURRICULAM VITE

Name Dr A K Hemanth Kumar
Designation Scientist D & Head
Date of Birth 20/04/1959
Discipline/Division Clinical Pharmacology
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Educational Qualifications

DEGREE	INSTITUTION AND LOCATION	YEAR	FIELD OF STUDY
MSc	Madras University	1982	Botany
PhD	The Tamil Nadu Dr MGR Medical University	2002	Biomedical Sciences

Employment Experience

Institution and Position	Duration	Project Name & Work Responsibilities
National Institute for Research in Tuberculosis (Indian Council of Medical Research), SCIENTIST D, Department of Clinical Pharmacology, Chennai – 600 031 India	1985 – till date 34 years	Research focus: Pharmacokinetics of anti-TB and antiretroviral drugs Worked on the following projects: 1. Bioavailability of rifampicin in fixed-dose combination drugs 2. Impact of HIV infection on the pharmacokinetics of anti-TB drugs 3. Drug-drug interactions among first-line anti-TB drugs and NNRTIs 4. Quality check of anti-TB & antiretroviral drugs 5. Pharmacokinetics of anti-TB and antiretroviral drugs in Indian patients

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		<ol style="list-style-type: none">6. Significance of pharmacogenetics in anti-TB and antiretroviral therapy7. Pharmacokinetics of moxifloxacin8. Pharmacokinetics of rifabutin9. Pharmacokinetic studies in children <p>Ongoing projects:</p> <ol style="list-style-type: none">1. Pharmacokinetics of second line drugs in MDR-TB patients – impact of diabetes and time to culture conversion.2. Drug – drug interactions between first line anti-TB and anti-diabetic drugs in patients with tuberculosis and diabetes3. Pharmacokinetics of second line anti-TB drugs in children and adolescents with MDR-TB
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Trainings and Conferences: (Last 5 years)

1. Presented two papers in the 68th National Conference on Tuberculosis and Chest Diseases, held at New Delhi, during February 23-26, 2014
2. Presented paper in the 69th National Conference on Tuberculosis and Chest Diseases, held at Mumbai, during February 5 - 7, 2015
3. Participated in the residential training programme on “Accountability and Responsiveness In Scientific Organizations” conducted by Department of Science & Technology (DST), at Vadodara (Baroda), Gujarat, during October 12 – 16, 2015.
4. Poster presentation National Conference on “Frontiers in MS Technology and Emerging Applications” organised by Indian Institute of Chromatography & Mass Spectrometry at Chennai on November 30, 2015.
5. Attended workshop on Bio specimen and FreezerPro, on Feb 17, 2016 at NIRT, organised by National Institute of Allergy and Infectious Diseases.
6. Poster presentation in the Conference on Retroviruses and Opportunistic Infections organised by International Antiviral Society (IAS) – USA in Boston, USA during February 22 - 25, 2016.

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7. Poster presentation in the 71st National Conference on Tuberculosis and Chest Diseases (NATCON 2016) held at Chandigarh during December 16 – 18, 2016
8. Participated in 4th National Conference on “Frontiers in MS Technology and Emerging Applications” held at Chennai on November 24th, 2017 organised by Indian Institute of Chromatography & Mass Spectrometry.
9. Oral presentation in the 72st National TB Conference held at Rajahmundry, A.P., during December 15-17, 2017
10. Training programme on “Quality Management Systems and Internal Audit in Medical Laboratories as per ISO 15189:2012”, held at Apollo Speciality Hospitals, Chennai during December 18 – 21, 2017
11. Workshop on “Updates in ICMR Ethical guidelines” organized by NIRT –IEC, on July 21, 2018
12. Awarded scholarship for poster presentation titled “Pharmacokinetics of rifabutin at different doses during atazanavir/ritonavir co-administration in HIV-infected tuberculosis patients in India” in the AIDS 2018 Conference, organized by the International AIDS Society at Amsterdam, Netherlands during July 23 – 27, 2018
13. Training program on “Good Clinical Laboratory Practice” organised by ICMR-NIRT, Chennai on July 31 & August 01, 2018 under the aegis of Clinical Development Services Agency (CDSA), an extramural unit of Translational Health Science & Technology Institute (THSTI) and Department of Biotechnology.
14. Two days training program on Advance Microsoft Excel organized Department of Health Economics, ICMR-NIRT during October 3 -4, 2018
15. Training program on Microsoft Power Point organized by ICMR-NIRT on October 17, 2018
16. Oral presentation in the 73rd National Conference on Tuberculosis and Chest Diseases (NATCON 2019) held at Nagpur during January 4 – 6, 2019

Professional Achievements:

1. Awarded fellowship under an International program (International Centre for Excellence in Research) to undergo training focused on estimation of antiretroviral drugs, protease inhibitors, in particular, in biological fluids, at the Department of Pharmacology and Toxicology, University of Alabama at Birmingham, USA (Mentor: Dr. Edward Acosta), and hands on training in the WinNonlin Software, version 5.1 at Pharsight Corporation, North Carolina, USA. During the period February 6th – April 26th, 2006.

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2. Awarded fellowship under an international program (FOGARTY – AITRP) to undergo training on method development by LCMS for the estimation of anti-TB drugs in biological fluids, at the Department of Pharmacology, Tuft's University at Boston, USA (Mentor: Dr. Michael Court) during the period August 12th, 2011 – October 31st, 2011.
3. Awarded travel grant under the Union for oral presentation in the 44th Union World Conference on Lung Health (IUATLD), held in Paris from October 30 – November 3, 2013, organized by the International Union Against Tuberculosis and Lung Disease (The Union).
4. Awarded travel grant for oral presentation in the 45th Union World Conference on Lung Health, held in Barcelona, Spain from October 28 – November 1, 2014, by the International Union Against Tuberculosis and Lung Disease (The Union).
5. Awarded travel grant for poster presentation in the Conference on Retroviruses and Opportunistic Infections, held at Boston, Massachusetts, USA during February 22 – 25, 2016, organised by the International Antiviral Society (IAS) – USA.
6. Awarded travel grant for poster presentation in the AIDS 2018 Conference held at Amsterdam, The Netherlands during July 23 – 27, 2018 organised by the International Antiviral Society (IAS) – USA.

Publications: (Last 5 years) -Total No. of publications : 71

1. Geetha Ramachandran, **AK Hemanth Kumar**, T Kannan, R Sridhar, SK Guha, Deelip Kadam, N Poorana Gangadevi, T Rajapandian
Pharmacokinetics of rifabutin during atazanavir/ritonavir co-administration in HIV-infected TB patients Indian Journal of Tuberculosis.
Indian Journal of Tuberculosis 2018;
2. Narendran Gopalan, Ramesh Kumar Santhanakrishnan, Alangudi Natarajan Palaniappan, Pradeep Aravindan Meenon, Sekar Lakshman, Padma Priyadarshnini, Gomathi Narayan Sivaramakrishnan, Devarajulu Reddy, Bhavani Perumal Kannabiran, **Hemanth Kumar Agibothu**, Vijay Krishnamoorthy, Sridhar Rathinam, Chandrasekar Chockalingam, Tamizhselvan Monaharan, Mahilmaran Ayyamperumal, Nalini Jayanthi, Kumar Satagopan, Ravichandran Narayanan, Raja Krishnaraja, Sekar Sathiyavelu, Bhanu Kesavamurthy, Chandra Suresh, Murugesan Selvachitiram, Gunasundari Arasan, Stella Susaimuthu, Prabhakaran Rathinam, Prabhakar Angamuthu, Lavanya Jayabal, Lakshmi Murali, Ranjai Ramachandran, Srikanth Prasad Tripathy, Soumya Swaminathan.
Daily vs Intermittent Antituberculosis Therapy for Pulmonary Tuberculosis in Patients with HIV: A Randomized Clinical Trail
Jama Intern Med. 2018. doi:10.1001/jamainternmed.2018.0141

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3. Rajeshwar Dayal, Yatish Singh, Dipti Agarwal, Manoj Kumar, Soumya Swaminathan, Geetha Ramachandran, Santosh Kumar, Shamrendra Narayanan, Ankur Goyal, **AK Hemanth Kumar** Pharmacokinetic study of isoniazid and pyrazinamide in children: impact of age and nutritional status
Arch Dis Child 2018; 0:1-5. Doi:10.1136/archdischild-2017-313910
4. **Agibothu Kuppuram Hemanth Kumar**, Alok Kumar, Thiruvengadam Kannan, Rakesh Bhatia, Dipti Agarwal, Santosh Kumar, Rajeshwar Dayal, Sheo Pratap Singh, Geetha Ramachandran. Pharmacokinetic of Second-Line antituberculosis drugs in children with multi-drug resistant tuberculosis in India.
Antimicrobial Agents and Chemotherapy 2018; 62(5): e02410-17
5. **AK Hemanth Kumar**, K Ramesh, T Kannan, V Sudha, Hemalatha Hariababu, J Lavanya, Soumya Swaminathan and Geetha Ramachandran.
Inpatient variability in plasma rifampicin & isoniazid in tuberculosis patients.
Indian Journal of Medical Research 2018; 147: 287 - 292
6. Benjamin Guiastrenec, Geetha Ramachandran, Mats O. Karlsson, **AK Hemanth Kumar**, Perumal Kannabiran Bhavani, N. Poorana Ganagadevi, Soumya Swaminathan, Amita Gupta, Kelly E. Dolley and Radojka M. Savic
Suboptimal Antituberculosis Drug Concentrations and outcomes in small and HIV-coinfected children in India: Recommendations for Dose Modifications.
Clinical Pharmacology & Therapeutics 2017; doi:10.1002/cpt.987
7. **AK Hemanth Kumar**, K Ramesh, T Kannan, V Sudha, Hemalatha Hariababu, J Lavanya, Soumya Swaminathan and Geetha Ramachandran.
N-acetyltransferase gene polymorphisms & plasma isoniazid concentrations in patients with tuberculosis.
Indian J Med Res 2017; 145: 118 - 123
8. **AK Hemanth Kumar**, Arun Kumar Polisetty, V Sudha, A Vijayakumar, Geetha Ramachandran.
A selective and sensitive high performance liquid chromatography assay for the determination of cycloserine in human plasma.
Indian Journal of Tuberculosis 2017
9. Bindu Parachalli Gopalan, Kayur Mehta, Reena R.D'souza, Niharika Rajnala, **Hemanth Kumar AK**, Geetha Ramachandran, Anita Shet.
Sub-therapeutic nevirapine concentration during antiretroviral treatment initiation among children living with HIV: Implications for therapeutic drug monitoring
PLOS ONE, <https://doi.org/10.1371/journal.pone.0183080>, 2017
10. **Agibothu Kuppuram Hemanth Kumar**, Vedachalam Chandrasekaran, Angadi Kiran Kumar, M Kawaskar, J Lavanya, Soumya Swaminathan and Geetha Ramachandran.
Food Significantly reduces plasma concentrations of first-line anti-tuberculosis drugs.
Indian J Med Res 2017; 145: 530 – 535

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11. Ramachandran G, **Kumar AK**, Chandrasekaran V, Kannan T, Vijayalakshmi R, Dusthacker VN, Ramesh K, Lavanya J, Swaminathan S.
Factors influencing tuberculosis treatment outcome in adult patients treated with thrice-weekly regimens in India.
Antimicrob Agents Chemother. 2017; 61(5): e02464-16
12. AK Hemanth Kumar, V Chandrasekaran, T Kannan, A Lakshmi Murali, J Lavanya, V Sudha, Soumya Swaminathan, Geetha Ramachandran
Anti-tuberculosis drug concentrations in tuberculosis patients with and without diabetes mellitus
Eur J Clin Pharmacol 2017; 73: 65-70
13. Hemanth Kumar AK, Sudha V, Ramachandran G.
A Simple and Rapid liquid chromatography method for determination of Levofloxacin in Plasma
SAARC J TUBER LUNG DIS HIV/AIDS 2016; XIII (2)
14. Geetha Ramachandran, **AK Hemanth Kumar**, T Kannan, PK Bhavani, S Ramesh Kumar, N Poorna Gangadevi, VV Banurekha, V Sudha, S Venkatesh, N Ravichandran, S Kalpana, G Mathevan, GN Sanjeeva, Dipti Agarwal and Soumya Swaminathan
Low Serum Concentrations of Rifampicin and Pyrazinamide Associated with Poor Treatment Outcomes with Children with Tuberculosis Related to HIV Status
Pediatr Infect Dis J 2016; 35:530 – 534
15. Soumya Swaminathan, Jotam G, Geetha Ramachandran, **AK Hemanth Kumar**, Shashikant Srivastava, Devyani Deshpande, Eric Nuermberger and Tawanda Gumbo.
Drug Concentration Thresholds Predictive of Therapy Failure and Death in Childred with Tuberculosis: Bread Crumb Tails in Random Forests
Clin Infect Dis 2016; 63(S3): S63 - 74
16. K Ramesh, **AK Hemanth Kumar**, T Kannan, R Vijayalakshmi, V Sudha, S Manohar Nesakumar, T Bharathiraja, J Lavanya, S Swaminathan, G Ramachandran
SLCOB1 gene polymorphisms do not influence plasma rifampicin concentrations in a South Indian population
Int J Tuberc Lung Dis 2016: 20(9): 1231- 1235
17. **AK Hemanth Kumar**, T Kannan, V Chandrasekaran, V Sudha, A Vijayakumar, K Ramesh, J Lavanya, S Swaminathan, G Ramachandran
Pharmacokinetics of thrice-weekly rifampicin, isoniazid and pyrazinamide in adult tuberculosis patients in India
Int J Tuberc Lung Dis 2016; 20(9): 1236-1241
18. **Hemanth Kumar. AK.**, Sudha. V., Leelavathi A., Geetha Ramachandran
A Rapid Isocratic High Performance Liquid Chromatography (HPLC-UV) Method For The Quantification Of Ritonavir In Human Plasma
International Journal of Pharmacy and Pharmaceutical Sciences 2016; 8 (7): 64-68

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19. AK Hemanth Kumar, G Narendran, RS Kumar, G Ramachandran, L Sekar, K Raja, S Swaminathan
RMP exposure is lower in HIV-infected TB patients receiving intermittent than daily anti-tuberculosis treatment
Int J Tuberc Lung Dis 2015; 19(7):805–807
20. Sivaram V, Hemanth Kumar A K *, Kiran Kumar A, Sudha V, Geetha Ramachandran
UFLC/MS method for the estimation of ethambutol in human plasma and its application in tuberculosis patients
Asian Journal of Biomedical and Pharmaceutical Sciences, 2015; 5(41): 1-6
21. Geetha Ramachandran, AK Hemanth Kumar, PK Bhavani, T Kannan, S Ramesh Kumar, N. Poorna Gangadevi, VV Benurekha, L. Sekar, N Ravichandran, G Mathevan, N Sanjeeva, Rajeshwar Dayal, Soumya Swaminathan
Pharmacokinetics of First-line Antituberculosis Drugs in HIV-infected Children with Tuberculosis Treated with Intermittent Regimens in India
Antimicrobial Agents and Chemotherapy 2015; 59:1162 - 1167
22. Ezhilrasi K, Sudha V, Geetha Ramachandran, Dhamodharan Umapathy, Rama Rajaram, Indira Padmalayam, Vijay Viswanthan and Hemanth Kumar AK
A Simple and Specific Method for Estimation of Lipoic Acid in Human Plasma by High Performance Liquid Chromatography
J Chromatograph Separat Techniq 2014; 5:6
23. **Hemanth Kumar A K**, Sudha V, Geetha Ramachandran
Simple and rapid high pressure liquid chromatography method for estimation of ethionamide in plasma
Asian J Biomed and Pharm Sci, 2014; 4 (38); 1-5
24. Sagarika Devi, **Hemanth AK Kumar**, Geetha Ramachandran, Chandrasekareenthiran Subramanian, Perumal Karuppan
Growth and Mass Spectrometry profile of alternaria alternate pigment grown in maize grain extract.
J Microb, Biotech and Food Sci, 2014; 4(2): 179-184.
25. **Hemanth Kumar A K**, Sudha V, Geetha Ramachandran
Simple and rapid method for simultaneous estimation of isoniazid and acetyl isoniazid in urine by HPLC
Asian J Biomed and Pharm Sci, 2014; 4(34): 46-50.