



Kiat Ruxrungtham

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Kiat Ruxrungtham, MD, is a Professor of Medicine, Department of Medicine Chulalongkorn University; and Scientific Chair of the Chula Vaccine Research Center (ChulaVRC).

He is providing teaching and patient care at the King Chulalongkorn Memorial Hospital, Faculty of Medicine, Chulalongkorn University; and is mentoring junior researchers on HIV, vaccine, immunology research and also on clinical trials. He has published more than 280 peer review papers on HIV, immunology and allergy.

He is a faculty member of the faculty 1000 of Medicine, an editorial board member of the Scientific Report, Asia Pacific J of Allergy and Immunology, and ImmunoTargets and Therapy. He is also a reviewer for > 10 journals.

Specialty & Research Field of Interest

His research of interest including HIV, allergy and vaccine development.

Allergy: House dust mite allergen immunotherapeutic vaccine

HIV Researches: HIV treatment strategies, HIV T cell immunology

Vaccine Research and Development : dengue, HIV and house dust mite vaccine; and strategies to improve DNA vaccine immunogenicity. He has currently expanded his research to humanized mouse model and non-human primate studies.

Professional Awards and Honors

He has been recognized and awarded as

- 2006 Outstanding Internist Award on Medical Academy, Royal College of Physicians, Thailand
- 2007 Outstanding Researcher Award, and the Highest Citation Award, Chulalongkorn University, Bangkok, Thailand
- 2011 Outstanding Researcher of Thailand
- 2011 Senior Research Scholar Award from the Thailand Research Fund
- 2014 Senior Research Scholar Award from the Thailand Research Fund (Second Award)

Major grants awarded

1. NIAIDS, NIH, USA: CIPRA program; Clinical Trial Unit (CTU) and Clinical research site (CRS)
2. BIOTEC, NSTDA, Thailand: the Professional Research Team Strengthening Fund
3. The Thai Research Fund (TRF): Senior Research Scholar
4. The National Research Council Thailand
5. The Commission of Higher Education (CHE), Ministry of Education (MoE): National Research University Program of CHE (HR1161A)

6. The Senior Research Scholar, Thailand Research Fund

Professional Members and Administrative Contribution

1. President of the Allergy, Asthma, and Immunology Association, Thailand (AAIAT, 2011-2013)
2. Chairperson of research committee, The Royal College of Physicians, Thailand (2012-2013)
3. Vice Dean on Research, Faculty of Medicine, Chulalongkorn University (2009-2012)
4. Deputy Director, HIVNAT and Thai Red Cross AIDS Research Center (2005-2016)
5. Vice President on Research Development and Innovation, Chulalongkorn University (2016-present)
6. Co-chair of the Asia Pacific Association of Allergy, Asthma and Clinical Immunology (APAAACI) will be held in 2018, Bangkok, Thailand

Publications: He has published more than 320 papers in peer-reviewed journals. (PubMed as of March 2018), total citation 5893, and hi-Index =35 (Exclude self-citations of all authors)

Selected publications

1. Ruxrungtham K, Brown T, Phanuphak P. HIV/AIDS in Asia. *Lancet*. 2004; 364:69-82.
2. Ruxrungtham K, Pedro RJ, Latiff GH, Conradie F, et al. Impact of reverse transcriptase resistance on the efficacy of TMC125 (etravirine) with two NRTIs in protease inhibitor-naïve, NNRTI-experienced patients: study TMC125-C227. *HIV Med*. 2008; 9:883-96.
3. Ketloy C, Engering A, Srichairatanakul U, Limsalakpetch A, Yongvanitchit K, Pichyangkul S, Ruxrungtham K. Expression and function of Toll-like receptors on dendritic cells and other antigen presenting cells from non-human primates. *Vet Immunol Immunopathol*. 2008;125:18-30.
4. Madruga JV, Berger D, McMurchie M, Suter F, Banhegyi D, Ruxrungtham K, Norris D, Lefebvre E, de Béthune MP, Tomaka F, De Pauw M, Vangeneugden T, Spinosa-Guzman S; TITAN study group. Efficacy and safety of darunavir-ritonavir compared with that of lopinavir-ritonavir at 48 weeks in treatment-experienced, HIV-infected patients in TITAN: a randomised controlled phase III trial. *Lancet*. 2007;370:49-58.
5. Hemachandra A, Puls RL, Sirivichayakul S, Kerr S, Thantiworasit P, Ubolyam S, Cooper DA, Emery S, Phanuphak P, Kelleher A, Ruxrungtham K. An HIV-1 clade A/E DNA prime, recombinant fowlpox virus boost vaccine is safe, but non-immunogenic in a randomized phase I/IIa trial in Thai volunteers at low risk of HIV infection. *Hum Vaccin*. 2010; 6:835-40.
6. Buranapraditkun S, Hempel U, Pitakpolrat P, Allgaier RL, Thantivorasit P, Lorenzen SI, Sirivichayakul S, Hildebrand WH, Altfeld M, Brander C, Walker BD, Phanuphak P, Hansasuta P, Rowland-Jones SL, Allen TM, Ruxrungtham K. A novel immunodominant CD8+ T cell response restricted by a common HLA-C allele targets a conserved region of Gag HIV-1 clade CRF01_AE infected Thais. *PLoS One*. 2011; 6:e23603.
7. Sirivichayakul S, Thantiworasit P, Chatkulkawin P, Buranapraditkun S, Munier ML, Kelleher AD, Ruxrungtham K. Immunogenicity assay validation for an HIV vaccine trial: high IFN γ +/IL-2+ CD8+ T cells background in healthy Thais. *Vaccine*. 2011; 29:6002-7.

8. Bunupuradah T, Chetchotisakd P, Ananworanich J, Munsakul W, Jirajariyavej S, Kantipong P, Prasithsirikul W, Sungkanuparph S, Bowonwatanuwong C, Klinbuayaem V, Kerr SJ, Sophonphan J, Bhakeecheep S, Hirschel B, Ruxrungtham K; the HIV STAR Study Group. A randomized comparison of second-line lopinavir/ritonavir monotherapy vs. tenofovir/lamivudine/lopinavir/ritonavir in patients failing NNRTI-regimens: the HIV STAR study. *Antivir Ther.* 2012 Jul 2. doi: 10.3851/IMP2222.
9. Puthanakit T, Saphonn V, Ananworanich J, ... and Ruxrungtham K; on behalf of the PREDICT Study Group. Early versus deferred antiretroviral therapy for children older than 1 year infected with HIV (PREDICT): a multicentre, randomised, open-label trial. *Lancet Infect Dis.* 2012 Oct 8. pii:S1473-3099(12)70242-6. doi: 10.1016/S1473-3099(12)70242-6.
10. Permpalung N, Puthcharoen O, Avihingsanon A, Ruxrungtham K. Treatment of HIV infection with once-daily regimens. *Expert Opin Pharmacother.* 2012 Nov;13(16):2301-17. doi: 10.1517/14656566.2012.729040.
11. Prompetchara E, Ketloy C, Keelapang P, Sittisombut N, Ruxrungtham K. Induction of neutralizing antibody response against four dengue viruses in mice by intramuscular electroporation of tetravalent DNA vaccines. *PLoS One.* 2014;:e92643.
12. Parsons MS, Madhavi V, Ana-Sosa-Batiz F, Center RJ, Wilson KM, Bunupuradah T, Ruxrungtham K, Kent SJ. Brief Report: Seminal Plasma Anti-HIV Antibodies Trigger Antibody-dependent Cellular Cytotoxicity: Implications for HIV Transmission. *J Acquir Immune Defic Syndr.* 2016 Jan 1;71(1):17-23.
13. Cooper DA, Cordery DV, Zajdenverg R, Ruxrungtham K, Arastéh K, Bergmann F, Neto JL, Scherer J, Chaves RL, Robinson P; study team. Tipranavir/Ritonavir (500/200 mg and 500/100 mg) Was Virologically Non-Inferior to Lopinavir/Ritonavir (400/100 mg) at Week 48 in Treatment-Naïve HIV-1-Infected Patients: A Randomized, Multinational, Multicenter Trial. *PLoS One.* 2016 Jan 5;11(1):e0144917.
14. Puthcharoen O, Do T, Avihingsanon A, Ruxrungtham K. Rationale and clinical utility of the darunavir-cobicistat combination in the treatment of HIV/AIDS. *Drug Des Devel Ther.* 2015 Oct 23;9:5763-9. doi: 10.2147/DDDT.S63989. eCollection 2015. Review.
15. Boyd MA, Moore CL, Molina JM, Wood R, Madero JS, Wolff M, Ruxrungtham K, Losso M, Renjifo B, Teppler H, Kelleher AD, Amin J, Emery S, Cooper DA; SECOND-LINE study group. Baseline HIV-1 resistance, virological outcomes, and emergent resistance in the SECOND-LINE trial: an exploratory analysis. *Lancet HIV.* 2015 Feb;2(2):e42-51.
16. Xu GJ, Kula T, Xu Q, Li MZ, Vernon SD, Ndung'u T, Ruxrungtham K, Sanchez J, Brander C, Chung RT, O'Connor KC, Walker B, Larman HB, Elledge SJ. Viral immunology. Comprehensive serological profiling of human populations using a synthetic human virome. *Science.* 2015 Jun 5;348(6239):aaa0698.
17. Rungtivasuwan K, Avihingsanon A, Thammajaruk N, Mitruk S, Burger DM, Ruxrungtham K, Punyawudho B, Pengsuparp T. Influence of ABCC2 and ABCC4 polymorphisms on tenofovir plasma concentrations in Thai HIV-infected patients. *Antimicrob Agents Chemother.* 2015;59(6):3240-5.
18. Ananworanich J, Kerr SJ, Jaimulwong T, Vibol U, Hansudewechakul R, Kosalaraksa P, Ngampiyaskul C, Kanjanavanit S, Wongsawat J, Luesomboon W, Apornpong T, Soulas C, Paul R, Ruxrungtham K, Puthanakit T. Soluble CD163 and monocyte populations in response to antiretroviral therapy and in relationship with

- neuropsychological testing among HIV-infected children. *J Virus Erad.* 2015;1(3):196-202.
19. Prompetchara E, Ketloy C, Keelapang P, Sittisombut N, Ruxrungtham K. The immunogenicity of tetravalent dengue DNA vaccine in mice pre-exposed to Japanese encephalitis or Dengue virus antigens. *Asian Pac J Allergy Immunol.* 2015 Sep;33(3):182-8.
 20. Teeraananchai S, Kerr SJ, Amin J, Ruxrungtham K, Law MG. Life expectancy of HIV-positive people after starting combination antiretroviral therapy: a meta-analysis. *HIV Med.* 2016 Aug 31. doi: 10.1111/hiv.12421.
 21. Ruxrungtham K, Sirivichayakul S, Buranapraditkun S, Krause W. Alemtuzumab-induced elimination of HIV-1-infected immune cells. *J Virus Erad.* 2016 Jan 1;2(1):12-8.
 22. Bunupuradah T, Kiertiburanakul S, Avihingsanon A, Chetchotisakd P, Techapornroong M, Leerattanapetch N, Kantipong P, Bowonwatanuwong C, Banchongkit S, Klinbuayaem V, Mekviwattanawong S, Nimitvilai S, Jirajariyavej S, Prasithsirikul W, Munsakul W, Bhakeecheep S, Chaivooth S, Phanuphak P, Cooper DA, Apornpong T, Kerr SJ, Emery S, Ruxrungtham K; LASA Study Group.. Low-dose versus standard-dose ritonavir-boosted atazanavir in virologically suppressed Thai adults with HIV (LASA): a randomised, open-label, non-inferiority trial. *Lancet HIV.* 2016 Aug;3(8):e343-50.
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 24. Kulthanan K, Tuchinda P, Chularojanamontri L, Chanyachailert P, Korkij W, Chunharas A, Wananukul S, Limpongsanurak W, Benjaponpitak S, Wisuthsarewong W, Aunhachoke K, Wessagowit V, Chatchatee P, Wattanakrai P, Jirapongsananuruk O, Klaewsongkram J, Noppakun N, Vichyanond P, Suthipinittharm P, Ruxrungtham K, Singalavanija S, Ngamphaiboon J. Clinical practice guideline for diagnosis and management of urticaria. *Asian Pac J Allergy Immunol.* 2016 Sep;34(3):190-200.
 25. Hiransuthikul A, Rattananupong T, Klaewsongkram J, Rerknimitr P, Pongprutthipan M, Ruxrungtham K. Drug-induced hypersensitivity syndrome/drug reaction with eosinophilia and systemic symptoms (DIHS/DRESS): 11 years retrospective study in Thailand. *Allergol Int.* 2016 Oct;65(4):432-438.
 26. Teeraananchai S, Kerr SJ, Ruxrungtham K, Avihingsanon A, Chaivooth S, Teeraratkul A, Bhakeecheep S, Ongwandee S, Thanprasertsuk S, Law MG. Loss to follow-up and associated factors of patients through the National AIDS Program in Thailand. *Antivir Ther.* 2018 Mar 27.
 27. Siripassorn K, Ruxrungtham K, Manosuthi W. Successful drug desensitization in patients with delayed-type allergic reactions to anti-tuberculosis drugs. *Int J Infect Dis.* 2018 Feb 2;68:61-68.
 28. Srivarangkul P, Yuttithamnon W, Suroengrit A, Pankaew S, Hengphasatporn K, Rungrotmongkol T, Phuwapraisirisan P, Ruxrungtham K, Boonyasuppayakorn S. A novel flavanone derivative inhibits dengue virus fusion and infectivity. *Antiviral Res.* 2018 Mar;151:27-38.
 29. Pett SL, Kunisaki KM, Wentworth D, Griffin TJ, Kalomenidis I, Nahra R, Montejano Sanchez R, Hodgson SW, Ruxrungtham K, Dwyer D, Davey RT, Wendt CH; INSIGHT FLU003 Plus Study Group . Increased Indoleamine-2,3-Dioxygenase Activity Is Associated With Poor Clinical Outcome in Adults Hospitalized With

- Influenza in the INSIGHT FLU003Plus Study. *Open Forum Infect Dis.* 2017 Oct 25;5(1):ofx228.
30. Rungtivasuwan K, Avihingsanon A, Thammajaruk N, Mitruk S, Burger DM, Ruxrungtham K, Sukasem C, Punyawudho B. Pharmacogenetics-based population pharmacokinetic analysis of tenofovir in Thai HIV-infected patients. *Pharmacogenomics.* 2017 Nov;18(16):1481-1490.
 31. Chaivooth S, Bhakeecheep S, Ruxrungtham K, Teeraananchai S, Kerr SJ, Teeraratkul A, Sirinirund P, Ongwandee S, Avihingsanon A, Benjarattanaporn P, Phanuphak N, Sungkanuparph S, Mekthon S, Phanuphak P. The challenges of ending AIDS in Asia: outcomes of the Thai National AIDS Universal Coverage Programme, 2000-2014. *J Virus Erad.* 2017 Oct 1;3(4):192-199.
 32. Kanchanatawan B, Hemrungronj S, Thika S, Sirivichayakul S, Ruxrungtham K, Carvalho AF, Geffard M, Anderson G, Maes M. Changes in Tryptophan Catabolite (TRYCAT) Pathway Patterning Are Associated with Mild Impairments in Declarative Memory in Schizophrenia and Deficits in Semantic and Episodic Memory Coupled with Increased False-Memory Creation in Deficit Schizophrenia. *Mol Neurobiol.* 2017 Sep5. doi: 10.1007/s12035-017-0751-8
 33. Bunupuradah T, Phupitakphol T, Sophonphan J, Prasitsuebsai W, Anugulruengkitt S, Jantarabenjakul W, Sopa B, Ruxrungtham K, Chanakul A, Puthanakit T; HIV-NAT 015 Study Team. Prevalence of Persistent Renal Dysfunction in Perinatally HIV-infected Thai Adolescents. *Pediatr Infect Dis J.* 2018 Jan;37(1):66-70.
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 35. Avihingsanon A, Maek-A-Nantawat W, Gatechompol S, Sapsirisavat V, Thiansanguankul W, Sophonphan J, Thammajaruk N, Ubolyam S, Burger DM, Ruxrungtham K. Efficacy and safety of a once-daily single-tablet regimen of tenofovir, Lamivudine, and efavirenz assessed at 144 weeks among antiretroviral-naïve and experienced HIV-1-infected Thai adults. *Int J Infect Dis.* 2017 Aug;61:89-96.
 36. Teeraananchai S, Kerr SJ, Puthanakit T, Bunupuradah T, Ruxrungtham K, Chaivooth S, Law MG, Chokephaibulkit K. Attrition and Mortality of Children Receiving Antiretroviral Treatment through the Universal Coverage Health Program in Thailand. *J Pediatr.* 2017 Sep;188:210-216.e1.
 37. Steens JM, Scherrer D, Gineste P, Barrett PN, Khuanchai S, Winai R, Ruxrungtham K, Tazi J, Murphy R, Ehrlich H. Safety, Pharmacokinetics, and Antiviral Activity of a Novel HIV Antiviral, ABX464, in Treatment-Naïve HIV-Infected Subjects in a Phase 2 Randomized, Controlled Study. *Antimicrob Agents Chemother.* 2017 Jun 27;61(7). pii: e00545-17.
 38. Teeraananchai S, Bunupuradah T, Puthanakit T, Kerr SJ, Ruxrungtham K, Chaivooth S, Bhakeecheep S, Law MG, Chokephaibulkit K. First-Line Antiretroviral Treatment Outcomes and Durability in HIV-Infected Children Treated Through the Universal Coverage Health Program in Thailand. *J Acquir Immune Defic Syndr.* 2017 Jun 1;75(2):219-225.
 39. Kawkitinarong K, Suwanpimolkul G, Kateruttanakul P, Manosuthi W, Ubolyam S, Sophonphan J, Avihingsanon A, Ruxrungtham K. Real-Life Clinical Practice of

- Using the Xpert MTB/RIF Assay in Thailand. *Clin Infect Dis.* 2017 May 15;64(suppl_2):S171-S178.
40. Suwanpimolkul G, Kawkitinarong K, Manosuthi W, Sophonphan J, Gatechompol S,
 41. Ohata PJ, Ubolyam S, Iampornsint T, Katerattanakul P, Avihingsanon A, Ruxrungtham K. Utility of urine lipoarabinomannan (LAM) in diagnosing tuberculosis and predicting mortality with and without HIV: prospective TB cohort from the Thailand Big City TB Research Network. *Int J Infect Dis.* 2017 Jun;59:96-102.
 42. Putcharoen O, Wattanachanya L, Sophonphan J, Siwamogsatham S, Sapsirisavat V, Gatechompol S, Phonphithak S, Kerr SJ, Chattranukulchai P, Avihingsanon Y, Ruxrungtham K, Avihingsanon A; HIV-NAT 006 team. New-onset diabetes in HIV-treated adults: predictors, long-term renal and cardiovascular outcomes. *AIDS.* 2017 Jul 17;31(11):1535-1543.
 43. Kanchanatawan B, Sirivichayakul S, Ruxrungtham K, Carvalho AF, Geffard M, Anderson G, Maes M. Deficit Schizophrenia Is Characterized by Defects in IgM-Mediated Responses to Tryptophan Catabolites (TRYCATs): a Paradigm Shift Towards Defects in Natural Self-Regulatory Immune Responses Coupled with Mucosa-Derived TRYCAT Pathway Activation. *Mol Neurobiol.* 2018 Mar;55(3):2214-2226.