

SCIENTIST PROFILE

Name: **DR. LUKE ELIZABETH HANNA**
Designation: Scientist 'E' & Head of the Department of HIV/AIDS
Date of Birth: 14.05.1971
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Educational Qualifications

DEGREE	INSTITUTION	YEAR	FIELD OF STUDY
Ph. D.	National Institute for Research in Tuberculosis, The Tamil Nadu Dr. MGR Medical University, Chennai	2000	Basic Medical Science
M.Sc. (Master of Science)	Dr. ALM Post-graduate Institute of Basic Medical Sciences, Madras University, Chennai	1993	Bio-medical Genetics
B.Sc. (Bachelor of Science)	Stella Maris College (Autonomous), Madras University, Chennai	1991	Zoology

1. Research Experience:

PERIOD	POSITION HELD & INSTITUTION
1994-2003	Research Assistant, National Institute for Research in Tuberculosis, Chennai
2003-2008	Scientist 'B', National Institute for Research in Tuberculosis, Chennai
2008-2012	Scientist 'C', National Institute for Research in Tuberculosis, Chennai
2012-2016	Scientist 'D', National Institute for Research in Tuberculosis, Chennai
2016 - Current	Scientist 'E' & Head of the Department of HIV/AIDS, National Institute for Research in Tuberculosis, Chennai

2. Membership/Fellowship of Professional Societies/Associations:

Member of the Scientific Advisory Committee of Sri Muthukumaran Medical College Hospital, Chennai.
Member of the EMTCT Phase II data validation Team for Chennai and Villupuram districts.

3. Workshops/Conferences/Symposiums:

International

- Australia Awards Fellowship program on “Translational Genomics and Metagenomics to Control the TB Epidemic” at Sydney, Australia. Nov 20-Dec 6, 2017.
- Third Consultation on Biobanking: access to storage and use of samples during a public health emergency" organized by WHO at Geneva, Switzerland. Oct 24-25, 2017.
- Technical consultation on "Scaling up Viral Load through Optimizing Existing Capacity" at Bangkok, Thailand. May 30-Jun 1, 2016.
- RePORT International Leadership Meeting at Boston, USA. Sep 23 - 25, 2015.
- Bi-regional Asia Pacific Workshop on ‘HIV Drug Resistance Genotyping’ at Ho Chi Minh City, Vietnam, May 25-28, 2010.
- Thailand MOPH-US CDC implemented HIV/AIDS Laboratory Program at Bangkok, Thailand. December 11-13, 2007.
- 31st Annual Meeting on Retroviruses at Cold Spring Harbor Laboratory, New York, USA, in May 2006.
- 30th Annual Meeting on Retroviruses at Cold Spring Harbor Laboratory, New York, USA, in May 2005.
- 10th International Workshop on Virus Evolution and Molecular Epidemiology at Helsinki, Finland, August 2004.
- WHO-UNAIDS sponsored Workshop on subtyping HIV-1 strains in South-east Asia using the Heteroduplex Mobility Assay at Bangkok, Thailand. February 2002.

National (2016-2020)

- National Symposium on Emerging and Re-emerging Viral Diseases at the Mohamed Sathak College of Arts and Science, Chennai, on 21 February 2020.
- International Science Symposium on HIV and Infectious Diseases at Chennai, 12 -14 October 2019.
- RePORT India 9th Annual Joint Leadership meeting at Mumbai, 10 - 12 February 2020.
- 74th National TB Conference (NATCON) at Chennai, 21st - 22nd December 2019. South Zone CME of HVF Hospitals at Chennai, on 18 January 2019.
- Workshop on WHO Pre-qualification for Testing Laboratories at AMTZ, Vizag, on 20 - 21 June 2018.
- First National Workshop on WHO Pre-qualification of IVDs at AMTZ, Vizag, on 28 - 29 August 2018.
- International Conference on Immunology at Sri Ramachandra Medical College & University, Chennai, on 27-28 September 2019.
- CME Program organized by HVF Hospital, Chennai, on 26th October 2018.
- National MicroBioCon at the Post-graduate Institute of Basic Medical Sciences, Chennai, on 14th November 2018.
- National Seminar on Prevention of AIDS at Sri Venkateshwara College of Engineering, Chennai, on 1st December 2018.

- National Seminar on Medical Technology in Health Care: a driving force at the Sanakara Nethralaya Academy, Chennai, on 9th March 2019.
- International Conference on Emerging Perspectives in Bioengineering and Biomedical Informatics with special relevance to ethnomedicine in human health at the Sathyabama Institute of Science and Technology, Chennai, on 26th March 2019.
- International symposium on Application of AMD and Public Health Partners in India" at NIRT. Aug 18-19, 2017.
- National Conference on "Emerging trends in viral diseases" at the Post graduate Institute of Basic Medical Sciences, Madras University. Feb 14, 2018.
- RePORT India Annual meeting at ICGEB, New Delhi. Feb 15-17, 2018.
- CME on "Emerging Respiratory Infections" at Sree Balaji Dental College & Hospital, Chennai, organized by the Tamil Nadu Chapter of the Indian Association of Medical Microbiologists, on July 29, 2016.
- International symposium on Tr@inforPedHIV/TB-India at Chennai. Jan 23 - 25, 2017.
- Indo-UK Workshop on Genomics Medicine at NIRT, Chennai. Nov 10, 2016.
- CME on "HIV/AIDS – An update" organized by the Department of Microbiology, Meenakshi Ammal Dental College, Meenakshi University in association with the Indian Association of Medical Microbiologists TN chapter. Dec 1, 2016.
- National Seminar on Understanding the molecular aspects of microbial drug resistance: An emerging microbial threat to health´ at the Sri Venkateshwara College of Engineering, Chennai. Dec 5 - 9, 2016.
- RePORT India Meeting at Hyderabad, India. Feb 2 - 5, 2017.
- International Symposium on "Genomics of *Mycobacterium tuberculosis*" at NIRT, Chennai. Feb 17-18, 2017.
- CME cum Seminar titled "Basics of Immunology and Its Clinical Applications" at the Madurai Kamaraj University, Madurai. Mar 8 - 10, 2017.
- ICMR-SAMRC meeting on HIV Research at ICMR, New Delhi. Mar 28, 2017.
- Indo-Dutch Meeting organized by IAVI at New Delhi, Feb 8 - 10, 2016.
- International Conference on Women and Health at the Indian Institute of Science, Bangalore, Nov 18 - 20, 2015.
- International Conference on Innovations in Diagnostics and Therapeutics organized by the Centre for Drug Discovery, Sathyabama University, Chennai, Mar 7 & 8, 2016.

4. Awards:

- Australia Awards Fellowship at the University of Sydney, Australia. Nov 19 - Dec 2, 2017
- Fogarty AIDS International Training Fellowship at the Albert Einstein College of Medicine, Bronx, USA – 2004-2007
- University first rank in M.Sc. Biomedical Genetics – Madras University – 1993
- Gold Medalist in B.Sc. Zoology, Madras University – 1991
- Prof. Ittasambasiviah Cash Award for first rank in B.Sc. Zoology - 1991
- Tmt. Kanchi Kamakoti Ammal Silver Medal for General Proficiency in B.Sc. – 1991
- Jawaharlal Nehru Science Talent Award – 1988

5. Research projects undertaken:

Funded Research Projects as PI

- (i) Development of therapeutic broadly neutralizing monoclonal antibodies against circulating HIV-1 clade C in children and adults. 2021-2014. Funded by DBT.
- (ii) Role of persistent immune activation and systemic inflammation on accelerated immune senescence and increased mortality in successfully treated and cured TB patients. 2021-2021. Funded by ICMR.
- (iii) Cohorts for HIV Resistance and Progression in Indian Children and Adults (CoHRPICA). 2018-2022. Funded by DBT/ICMR/IAVI.
- (iv) Biomarkers for Tuberculosis Diagnosis and Treatment Response. 2018-2020. Funded by CRDF Global through NIH/NIAID.
- (v) Establishment of National TB Biorepository for RePORT India study. 2015-2020. Funded by DBT.
- (vi) Establishment of an in-country PBMC EQAS Program. 2016-2020. Funded by CRDF Global through NIH/NIAID.
- (vii) Role of Myeloid Derived Suppressor Cells in *Mycobacterium tuberculosis* reactivation in HIV-Mtb co infected individuals. 2016-2018. Funded by NIH (R21).
- (viii) Analysis of protective humoral and cell mediated immunity in HIV vaccinated individuals. 2015-2016. Funded by IAVI through USAID.
- (ix) ICMR-Biomedical Informatics Centers, Phase II. 2013-2018. ICMR Task Force.
- (x) Structure-based rational design and synthesis of inhibitors for various enzymes of HIV. 2013-2016. Funded by DBT/ICMR.
- (xi) Attenuated HIV/TB Vaccine for India. 11/2011-10/2013. Funded by NIH (R03).
- (xii) ICMR-Biomedical Informatics Centers, Phase I. 2007-2012. ICMR Task Force.
- (xiii) Regional Reference Laboratory for HIV-1 viral load and DNA-PCR. 2009 till date. Funded by NACO.

Funded Research Projects as Co-PI/Co-investigator

- i. Regional Prospective Observational Research in Tuberculosis (RePORT India Phase II). 2019 - 2023. Funded by DBT/NIH.
- ii. Inflammasome genetics and tuberculosis treatment outcomes. 2019 - 2021. Funded by CRDF Global-RePORT CFAR Supplemental funding.
- iii. T cell biomarkers and T regulatory responses to pediatric TB. 2019 - 2021. Funded by CRDF Global-RePORT CFAR Supplemental funding.
- iv. A Phase III, Randomized, Double-blind, Placebo controlled Trial to Evaluate the Efficacy and Safety of VPM1002 and Immuvac Vaccines in Preventing Tuberculosis (TB) in Healthy Household Contacts of Newly Diagnosed Sputum Positive Pulmonary TB Patients. Funded by ICMR/ITRC.
- v. Cohort for Tuberculosis Research by the Indo-US Medical Partnership (CTRIUMPH): a multicentric prospective observational study. 2014-2019. Funded by DBT/NIH.

6. Publications:

1. Detection of drug resistance mutations in the reverse transcriptase gene of HIV-1-infected North Indian population failing first line antiretroviral therapy "A follow-up cohort study". Barik SK, Bansal AK, Mohanty PS, Tripathy SP, **Hanna LE**, Ramesh K, Sathyamoorthy P, Singh TP, Tandon R, Tomar S, Jena S, Patil SA, Mohanty KK. AIDS Res Hum Retroviruses. 2021 Jan 3. doi: 10.1089/AID.2020.0132.
2. Geographic and behavioral differences associated with sexually transmitted infection prevalence among Indian men who have sex with men in Chennai and Mumbai. Safren SA, Devaleen B, Biello KB, Rawat S, Thomas BE, Regenauer KS, Balu V, Bedoya CA, Dange A, Menon S, O'Cleirigh C, Baruah D,

- Anand V, **Hanna LE**, Karunaianantham R, Thorat R, Swaminathan S, Mimiaga MJ, Mayer KH. Int J STD AIDS. 2021 Feb;32(2):144-151. doi: 10.1177/0956462420943016.
3. Alterations in Circulating Metabolites with Neuroinflammatory Property and Their Impact on Neurological Function in HIV-1-Infected Individuals on Long-Term Suppressive cART. Babu H, Rachel G, **Hanna LE**. AIDS Res Hum Retroviruses. 2020 Nov 10. doi: 10.1089/aid.2020.0218.
 4. A facile method of mapping HIV-1 neutralizing epitopes using chemically masked cysteines and deep sequencing. Datta R, Roy Chowdhury R, Manjunath K, **Hanna LE**, Varadarajan R. Proc Natl Acad Sci U S A. 2020 Nov 24;117(47):29584-29594. doi: 10.1073/pnas.2010256117. Epub 2020 Nov 9. PMID: 33168755.
 5. Prevalence of SARS-CoV-2 infection in India: Findings from the national serosurvey, May-June 2020. Murhekar MV, Bhatnagar T, Selvaraju S, Rade K, Saravanakumar V, Vivian Thangaraj JW, Kumar MS, Shah N, Sabarinathan R, Turuk A, Anand PK, Asthana S, Balachandar R, Bangar SD, Bansal AK, Bhat J, Chakraborty D, Rangaraju C, Chopra V, Das D, Deb AK, Devi KR, Dwivedi GR, Salim Khan SM, Haq I, Kumar MS, Laxmaiah A, Madhuka, Mahapatra A, Mitra A, Nirmala AR, Pagdhune A, Qurieshi MA, Ramarao T, Sahay S, Sharma YK, Shrinivasa MB, Shukla VK, Singh PK, Viramgami A, Wilson VC, Yadav R, Girish Kumar CP, **Luke HE**, Ranganathan UD, Babu S, Sekar K, Yadav PD, Sapkal GN, Das A, Das P, Dutta S, Hemalatha R, Kumar A, Narain K, Narasimhaiah S, Panda S, Pati S, Patil S, Sarkar K, Singh S, Kant R, Tripathy S, Toteja GS, Babu GR, Kant S, Muliyl JP, Pandey RM, Sarkar S, Singh SK, Zodpey S, Gangakhedkar RR, S Reddy DC, Bhargava B. Indian J Med Res. 2020 Jul & Aug;152(1 & 2):48-60. doi: 10.4103/ijmr.IJMR_3290_20. PMID: 32952144
 6. Deep-profiling identifies selection of non-synonymous amino acid substitutions in HIV-1 envelope during early infection. Ashokkumar M, Sathyamoorthy P, Tripathy SP, Neogi U, **Hanna LE**. AIDS Res Hum Retroviruses. 2020 Aug 11. doi: 10.1089/AID.2020.0143.
 7. Tuberculosis preventive treatment should be considered for all household contacts of pulmonary tuberculosis patients in India. Paradkar M, Padmapriyadarsini C, Jain D, Shivakumar SVBY, Thiruvengadam K, Gupte AN, Thomas B, Kinikar A, Sekar K, Bharadwaj R, Dolla CK, Gaikwad S, Elilarasi S, Lokhande R, Reddy D, Murali L, Kulkarni V, Pradhan N, **Hanna LE**, Pattabiraman S, Kohli R, S R, Suryavanshi N, B M S, Cox SR, Selvaraju S, Gupte N, Mave V, Gupta A, Bollinger RC; CTRIUMPH-RePORT India Study Team. PLoS One. 2020 Jul 29;15(7):e0236743. doi: 10.1371/journal.pone.0236743.
 8. An *in vitro* dataset on infectious potential of transmitted/founder (TF) and non-TF (NT) HIV-1 viruses generated from Interferon alpha-treated primary CD4⁺ T cells. Ashokkumar M, Sonawane A, Sathiyamani B, Esakialraj L BH, **Hanna LE**. Data Brief. 2020 Feb 29;29:105365. doi: 10.1016/j.dib.2020.105365.
 9. Genetic Characterization of Full-Length HIV-2 Long Terminal Repeat Sequences: Identification of Rare Promoter Variants. Manohar Nesakumar S, Hemalatha H, Vidyavijayan KK, Lucia Precilla K, Ramesh K, Murugavel KG, Tripathy SP, **Hanna LE**. AIDS Res Hum Retroviruses. 2020 Jun;36(6):533-538. doi: 10.1089/AID.2020.0027.
 10. 4-month moxifloxacin containing regimens in the treatment of patients with sputum-positive pulmonary tuberculosis in South India - a randomised clinical trial. Banurekha Velayutham, Mohideen Shaheed Jawahar, Dina Nair, Pooranagangadevi Navaneethapandian, Chinnaiyan Ponnuraja, Kandasamy Chandrasekaran, Gomathi Narayan Sivaramakrishnan, Marimuthu Makesh Kumar, Paramasivam Paul Kumaran, Santhanakrishnan Ramesh Kumar, Dhanaraj Baskaran, Daniel Bella Devaleenal, Devarajulu Reddy Sirasanambati, Mahalingam Vasantha, Paramasivam Palaniyandi, Geetha Ramachandran, Kadayam Ranganathan Uma Devi, **Luke Elizabeth Hannah**, Gomathi Sekar, Ammayappan Radhakrishnan, Dharuman Kalaiselvi, Angamuthu Dhanalakshmi, Elangovan

Thiruvalluvan, Murugesan Raja Sakthivel, Ayyamperumal Mahilmaran, Rathinam Sridhar, Lavanya Jayabal, Prabhakaran Rathinam, Prabhakar Angamuthu, Kumaresan Soorappa Ponnusamy, Perumal Venkatesan, Mohan Natrajan, Srikanth Prasad Tripathy, Soumya Swaminathan. *Trop Med Int Health*. 2020 Apr;25(4):483-495. doi: 10.1111/tmi.13371. Epub 2020 Feb 3.

11. Evaluation of antiviral T cell responses and TSCM cells in volunteers enrolled in a phase I HIV-1 subtype C prophylactic vaccine trial in India. Munusamy Ponnas S, Hayes P, Fernandez N, Thiruvengadam K, Pattabiram S, Nesakumar M, Srinivasan A, Kathirvel S, Shankar J, Goyal R, Singla N, Mukherjee J, Chatrath S, Gilmour J, Subramanyam S, Prasad Tripathy S, Swaminathan S, **Hanna LE**. *PLoS One*. 2020 Feb 25;15(2):e0229461. doi: 10.1371/journal.pone.0229461.
12. In vitro replicative fitness of early Transmitted founder HIV-1 variants and sensitivity to Interferon alpha. Ashokkumar M, Sonawane A, Sperk M, Tripathy SP, Neogi U, **Hanna LE**. *Sci Rep*. 2020 Feb 17;10(1):2747. doi: 10.1038/s41598-020-59596-x.
13. Immune stimulatory and anti-HIV-1 potential of extracts derived from marine brown algae *Padina tetrastrum*. Subramaniam D, **Hanna LE**, Maheshkumar K, Ponmurugan K, Al-Dhabi NA, Murugan P. *J Complement Integr Med*. 2020 Jan 29. pii: /j/jcim.ahead-of-print/ jcim-2019-0071/jcim-2019-0071.xml. doi: 10.1515/jcim-2019-0071.
14. Molecular characterization of *Enterococcus faecalis* isolates from urinary tract infection and interaction between *Enterococcus faecalis* encountered Dendritic and Natural Killer cells. Kathirvel S, Mani M, Gopala Krishnan GK, Sethumadhavan A, Vijayalakshmi T, Ponnas SM, **Hanna LE**, Mathaiyan M. *Microb Pathog*. 2020 Mar;140:103944. doi: 10.1016/j.micpath.2019.
15. Transcriptomic Profiles of Confirmed Pediatric Tuberculosis Patients and Household Contacts Identifies Active Tuberculosis, Infection, and Treatment Response among Indian Children. Tornheim JA, Madugundu AK, Paradkar M, Fukutani KF, Queiroz ATL, Gupte N, Gupte AN, Kinikar A, Kulkarni V, Balasubramanian U, Sreenivasamurthy S, Raja R, Pradhan N, Shivakumar SVBY, Valvi C, **Hanna LE**, Andrade BB, Mave V, Pandey A, Gupta A; CTRIUMPh RePORT India Study Team. *J Infect Dis*. 2019 Dec 4. pii: jiz639. doi: 10.1093/infdis/jiz639.
16. Role of neutrophils in tuberculosis: A bird's eye view. J NH, Das S, Tripathy SP, **Hanna LE**. *Innate Immun*. 2019 Nov 17:1753425919881176. doi: 10.1177/1753425919881176.
17. MAL adaptor (TIRAP) S180L polymorphism and tuberculosis disease severity among TB patients. Saranathan R, Sathyamurthi P, Thiruvengadam K, Murugesan S, Shivakumar SVBY, Gomathi NS, Kavitha D, Paradkar M, Puvaneshwari R, Kannan M, Madheswaran A, Pradhan N, Kulkarni V, Gupte AN, Gupte N, Mave V, Bollinger RC, Gupta A, Padmapriyadarsini C, **Hanna LE**; C-TRIUMPh Study Team. *Infect Genet Evol*. 2019 Oct 31:104093. doi: 10.1016/j.meegid.2019.104093.
18. Plasma Metabolic Signature and Abnormalities in HIV-Infected Individuals on Long-Term Successful Antiretroviral Therapy. Babu H, Sperk M, Ambikan AT, Rachel G, Viswanathan VK, Tripathy SP, Nowak P, **Hanna LE**, Neogi U. *Metabolites*. 2019 Sep 30;9(10). pii: E210. doi: 10.3390/metabo9100210.
19. Systemic Inflammation and the Increased Risk of Inflamm-Aging and Age-Associated Diseases in People Living With HIV on Long Term Suppressive Antiretroviral Therapy. Babu H, Ambikan AT, Gabriel EE, Svensson Akusjärvi S, Palaniappan AN, Sundaraj V, Mupanni NR, Sperk M, Cheedarla N, Sridhar R, Tripathy SP, Nowak P, **Hanna LE**, Neogi U. *Front Immunol*. 2019 Aug 27;10:1965. doi: 10.3389/fimmu.2019.01965.
20. Association of circulatory Tfh-like cells with neutralizing antibody responses among chronic HIV-1 subtype C infected long-term nonprogressors and progressors. Swathirajan CR, Nandagopal P, Vignesh R, Srikrishnan AK, Goyal R, Qureshi H, Saravanan S, Solomon SS, **Hanna LE**, Sivasankaran MP,

- Singla N, Mukherjee J, Chatrath S, Kopycinski J, Murugavel KG. Pathog Dis. 2019 Jun 1;77(4). pii: ftz044. doi: 10.1093/femspd/ftz044.
21. MiDRM pol : A High-Throughput Multiplexed Amplicon Sequencing Workflow to Quantify HIV-1 Drug Resistance Mutations against Protease, Reverse Transcriptase, and Integrase Inhibitors. Aralaguppe SG, Ambikan AT, Ashokkumar M, Kumar MM, **Hanna LE**, Amogne W, Sönnnerborg A, Neogi U. Viruses. 2019 Aug 30;11(9). pii: E806. doi: 10.3390/v11090806.
 22. Pulmonary *Mycobacterium kyorinense* disease: A case report and review of literature. Saranathan R, Padmapriyadarsini C, Sivaramakrishnan GN, Perumal BK, Kannayan S, Joseph B, Gopalan N, **Hanna LE**. Indian J Med Microbiol. 2019 Jan-Mar;37(1):127-131. doi: 10.4103/ijmm.IJMM_19_94.
 23. Induction and maintenance of bi-functional (IFN- γ + IL-2+ and IL-2+ TNF- α +) T cell responses by DNA prime MVA boosted subtype C prophylactic vaccine tested in a Phase I trial in India. Munusamy Ponnas S, Pattabiram S, Thiruvengadam K, Goyal R, Singla N, Mukherjee J, Chatrath S, Bergin P, T Kopycinski J, Gilmour J, Kumar S, Muthu M, Subramaniam S, Swaminathan S, Prasad Tripathy S, **Luke HE**. PLoS One. 2019 Mar 28;14(3):e0213911. doi: 10.1371/journal.pone.0213911.
 24. Infection free "resisters" among household contacts of adult pulmonary tuberculosis. Mave V, Chandrasekaran P, Chavan A, Shivakumar SVBY, Danasekaran K, Paradkar M, Thiruvengadam K, Kinikar A, Murali L, Gaikwad S, **Hanna LE**, Kulkarni V, Pattabiraman S, Suryavanshi N, Thomas B, Kohli R, Sivaramakrishnan GN, Pradhan N, Bhanu B, Kagal A, Golub J, Gandhi N, Gupte A, Gupte N, Swaminathan S, Gupta A; CTRIUMPH RePORT India Study Team. PLoS One. 2019 Jul 18;14(7):e0218034. doi: 10.1371/journal.pone.0218034.
 25. Computational approach identifies protein off-targets for Isoniazid-NAD adduct: hypothesizing a possible drug resistance mechanism in Mycobacterium tuberculosis. Hassan S, Sudhakar V, Nancy Mary MB, Babu R, Doble M, Dadar M, **Hanna LE**. J Biomol Struct Dyn. 2019 May 16:1-14. doi: 10.1080/07391102.2019.1615987.
 26. Sub-therapeutic rifampicin concentration is associated with unfavourable tuberculosis treatment outcomes. Ramachandran G, Chandrasekaran P, Gaikwad S, Hemanth Kumar AK, Thiruvengadam K, Gupte N, Paradkar M, Dhanasekaran K, Sivaramakrishnan GN, Kagal A, Thomas B, Pradhan N, Kadam D, **Hanna LE**, Balasubramanian U, Kulkarni V, Murali L, Golub J, Gupte A, Shivakumar SVBY, Swaminathan S, Dooley KE, Gupta A, Mave V; C-TRIUMPH team. Clin Infect Dis. 2019 May 10. pii: ciz380. doi: 10.1093/cid/ciz380.
 27. Transmitted HIV-1 Drug Resistance in a Treatment-Naive Cohort of Recently Infected Individuals from Chennai, India. Nesakumar M, Haribabu H, Cheedarla N, Karunaianantham R, Kailasam N, Sathyamurthi P, Selvachithiram M, Tripathy SP, **Hanna LE**. AIDS Res Hum Retroviruses. 2019 Aug;35(8):775-779. doi: 10.1089/AID.2019.0022.
 28. Cross Type Neutralizing Antibodies Detected in a Unique HIV-2 Infected Individual From India. Vidyavijayan KK, Cheedarala N, Babu H, Precilla LK, Sathyamurthi P, Chandrasekaran P, Murugavel KG, Swaminathan S, Tripathy SP, **Hanna LE**. Front Immunol. 2018 Dec 17;9:2841. doi: 10.3389/fimmu.2018.02841.
 29. Long-term virological outcome in children receiving first-line antiretroviral therapy. Chandrasekaran P, Shet A, Srinivasan R, Sanjeeva GN, Subramanyan S, Sunderesan S, Ramesh K, Gopalan B, Suresh E, Poornagangadevi N, **Hanna LE**, Chandrasekar C, Wanke C, Swaminathan S. AIDS Res Ther. 2018 Nov 26;15(1):23. doi: 10.1186/s12981-018-0208-9.
 30. Mapping of neutralizing antibody epitopes on the envelope of viruses obtained from plasma samples exhibiting broad cross-clade neutralization potential against HIV-1. Cheedarla N, Sundaramurthi JC, Hemalatha B, Brahmaiah A, Nesakumar M, Ashokkumar M, Kk VV, Tripathy SP, Swaminathan S Dr,

- Vaniambadi S K, Ramanathan VD, **Hanna LE**. *AIDS Res Hum Retroviruses*. 2018 Oct 17. doi: 10.1089/AID.2018.0224.
31. Induction of circulating T follicular helper cells and regulatory T cells correlating with HIV-1 gp120 variable loop antibodies by a subtype C prophylactic vaccine tested in a Phase I trial in India. Munusamy Ponnas S, Swaminathan S, Tiruvengadam K, K K V, Cheedarla N, Nesakumar M, Kathirvel S, Goyal R, Singla N, Mukherjee J, Bergin P, T Kopycinski J, Gilmour J, Prasad Tripathy S, **Luke HE**. *PLoS One*. 2018 Aug 29;13(8):e0203037. doi: 10.1371/journal.pone.0203037.
 32. Tuberculin skin test and QuantiFERON-Gold In Tube assay for diagnosis of latent TB infection among household contacts of pulmonary TB patients in high TB burden setting. Chandrasekaran P, Mave V, Thiruvengadam K, Gupte N, Shivakumar SVBY, **Hanna LE**, Kulkarni V, Kadam D, Dhanasekaran K, Paradkar M, Thomas B, Kohli R, Dolla C, Bharadwaj R, Sivaramakrishnan GN, Pradhan N, Gupte A, Murali L, Valvi C, Swaminathan S, Gupta A; CTRIUMPH Study Team. *PLoS One*. 2018 Aug 1;13(8):e0199360. doi: 10.1371/journal.pone.0199360. eCollection 2018.
 33. Exploring the conformational landscapes of HIV protease structural ensembles using principal component analysis. Hassan S, Srikakulam SK, Chandramohan Y, Thangam M, Muthukumar S, Gayathri Devi PK, **Hanna LE**. *Proteins*. 2018 Sep;86(9):990-1000. doi: 10.1002/prot.25534.
 34. Significance of catalase-peroxidase (KatG) mutations in mediating isoniazid resistance in clinical strains of *Mycobacterium tuberculosis*. Unissa AN, Doss C GP, Kumar T, Sukumar S, Lakshmi AR, **Hanna LE**. *J Glob Antimicrob Resist*. 2018 Jul 7;15:111-120. doi: 10.1016/j.jgar.2018.07.001.
 35. Diabetes and pre-diabetes among household contacts of tuberculosis patients in India: is it time to screen them all? Shivakumar SVBY, Chandrasekaran P, Kumar AMV, Paradkar M, Dhanasekaran K, Suryavarshini N, Thomas B, Kohli R, Thiruvengadam K, Kulkarni V, **Hannah LE**, Sivaramakrishnan GN, Pradhan N, Dolla C, Gupte A, Ramachandran G, DeLuca A, Meshram S, Bhardawaj R, Bollinger RC, Golub J, Selvaraj K, Gupte N, Swaminathan S, Mave V, Gupta A. *Int J Tuberc Lung Dis*. 2018 Jun 1;22(6):686-694.
 36. Unique Phenotypic Characteristics of Recently Transmitted HIV-1 Subtype C Envelope Glycoprotein gp120: Use of CXCR6 Coreceptor by Transmitted Founder Viruses. Ashokkumar M, Aralaguppe SG, Tripathy SP, **Hanna LE**, Neogi U. *J Virol*. 2018 Apr 13;92(9). pii: e00063-18. doi: 10.1128/JVI.00063-18.
 37. Evolution of Neutralization Response in HIV-1 Subtype C-Infected Individuals Exhibiting Broad Cross-Clade Neutralization of HIV-1 Strains. Cheedarla N, Hemalatha B, Anangi B, Muthuramalingam K, Selvachithiram M, Sathyamurthi P, Kailasam N, Varadarajan R, Swaminathan S, Tripathy SP, Vaniambadi SK, Vadakkupattu DR, **Hanna LE**. *Front Immunol*. 2018 Mar 27;9:618. doi: 10.3389/fimmu.2018.00618.
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