

CURRICULUM VITAE

Amit Sharma

Science academy fellowships:

- (1) National Academy of Sciences (NASI)
- (2) Indian Academy of Sciences (IAS)
- (3) Indian National Science academy (INSA)
- (4) The World Academy of Sciences (TWAS)
- (5) Indian Public Health Association (IPHA)

Education:

Purdue University, USA (B. Sc.)	1986-1990	Biology
Northwestern Univ., USA (Ph. D.)	1990-1995	Protein crystallography
Oxford Univ., UK (Post-doc)	1996-2000	Structural biology

Teaching and training experience:

Taught/trained undergraduates and Ph.D. students at Northwestern (USA), Oxford (UK) and ICGEB (India). Subjects: Bioinformatics, biochemistry, molecular biology, parasitology and structural biology.

Graduate students/post-docs trained:

Ph. Ds. (past and current): 22 (17, 5)
Post-docs (past and present): 26 (24, 2)
Project trainees: > 100

Awards and Honors:

2019	Lakshmipat Singhanian-IIM Lucknow National Leadership Award
2019	National Institute of Pathology, Oration Award
2018	Om Prakash Bhasin Award in Biological Sciences
2017	Selected for Royal Society Commonwealth Science Conference
2015	Infosys Science Award in Biological Sciences
2015	Elected fellow of The World Academy of Sciences
2015	Elected fellow of Indian National Science Academy, New Delhi
2014	Ranbaxy Science Research Award in Basic Medical Sciences
2014	JC Bose fellowship, Govt. of India
2013	Outstanding Senior Research Program Grant, DBT, Govt. Of India
2013	Member of NASI editorial board, India
2013	Selection committee for Early Career Wellcome Trust-DBT fellowships
2012	Elected Fellow of the Indian Academy of Sciences, Bangalore
2011	Shanti Swarup Bhatnagar Award in Biological Sciences
2010	ISCA Platinum Jubilee Lecture Award
2009	Goyal Young Scientist Prize
2008	National Bioscience Award, DBT, Govt. Of India
2008	S. Jaswant Singh Rai Memorial Award in Life Sciences
2007	Prof. Umakant Sinha Memorial Award of Indian Science Congress
2007	MOT Iyengar National Science Award for Biomedical Research
2006	Bachawat Memorial Award in Biomedical Sciences
2006	B. M. Birla Prize in Biological Sciences
2006	Elected Fellow of the National Academy of Sciences, Allahabad, India
2005-2010	Awarded Wellcome Trust Infrastructure Support Grant, UK
2001-2006	Awarded Wellcome Trust International Senior Research Fellowship, UK
1996-2000	Elected Research Fellow, St. John's College, Oxford University, UK
1993-1995	National Institute of Health National Research Scholarship,

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Northwestern University, USA

1990-1991 Howard Hughes Medical Institute Undergraduate Summer Fellowship

Other contributions (current and past):

1. ESRF Beam-time Allocation Panel
2. Task Force for Cryo-Electron Microscopy, SERB, DST
3. Research Advisory Committee of Bose Institute, Kolkata
4. Research Council of IMTECH, Chandigarh
5. Selection committee Wellcome Trust/India Alliance for fellowships
6. Selection committee for Khorana Indo-US fellowship
7. Selection committee for National Academy of Sciences fellowship
8. Selection committee for Indian Academy of Sciences fellowship
9. Selection committee for TWAS fellowships and awards
10. Reviewer for Shanti Swarup Bhatnagar Awards in Biological Sciences

Books/chapters:

1. *Charles Darwin: A driving force for humanity toward agnosticism* by **Amit Sharma** in *Nature At Work: Ongoing Saga of Evolution*, **Springer Press**
2. *Recent advances in malaria drug discovery and development* by Anmol Chandele and **Amit Sharma**, Book on Infectious Diseases, **Springer Press**
3. *Emerging importance of t-RNA synthetases as anti-malarial drug targets* by Anmol Chandele and **Amit Sharma** in *Drug Discovery in Infectious Diseases*, **Springer Press**

Others: Directed and produced a documentary on *Global Warming*.

Public lectures: In schools, colleges, research institutions and social/intellectual clubs on:
1) Malaria, 2) Structural Biology, 3) Human Evolution and Charles Darwin,
4) Infectious diseases and 5) Human microbiome, 6) Elimination of Malaria from India.

Research funding:

2020 – 2022	Global Health Innovative Technology grant for malaria drug development
2020 – 2024	NIH (USA) grant on Toxoplasma Drug Development
2017 – 2020	MMV/Global Health Innovative Technology (GHIT) grant
2016 – current	Medicines for Malaria Venture, Switzerland (<i>International</i>)
2004 – current	Department of Biotechnology, India
2007 – 2012	European Commission, EU (<i>International</i>)
2006 – 2011	Wellcome Trust, UK, Infrastructure support grant (<i>International</i>)
2005 - 2007	European Commission, EU (<i>International</i>)
2001 - 2006	Wellcome Trust, UK, International Senior Research Fellow (<i>International</i>)
2001 – 2003	World Health Organization, Switzerland (<i>International</i>)
2001 – 2003	World Health Organization, Switzerland (<i>International</i>)

Publications (some in review) in international peer-reviewed journals: ~147

Reviewer for:

Nature, Nature Communications, Nature Microbiology, Science, Science Translational Medicine, Science Advances, Journal of Biological Chemistry, Molecular Microbiology, Infection and Immunity, PLOS Pathogens, Acta D, Structure, PNAS etcetera.

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Expertise and research interests:

My laboratory takes a multi-disciplinary approach towards understanding malaria parasite proteins. We aim to highlight the principles that govern biological function of some key parasite proteins. Towards this end, we rely extensively on bioinformatics, biochemistry, cell biology, molecular biology, parasitology, protein crystallography and inhibitor discovery. The current focus of research includes target the protein translation machinery from malaria parasites for novel drug discovery. The research program spans experimental work starting from parasite genomics to target and inhibitor discovery, with the aim of providing potential anti-malarials.

Major current research projects:

Structural parasitology (malaria): Our laboratory explores and exploits druggable malaria parasite translation machinery proteins in order to contribute towards development of novel inhibitors. Our integrated approach uses X-ray crystallography along with biophysical/biochemical tools to unravel protein targets. In this context, we are in the midst of (1) understanding several enzyme-drug crystal structures (2) exploiting this knowledge for development of novel anti-malarials. We have received extensive international funding for this focus.

Citation:

Malaria remains a major global health problem. Parasite resistance to existing drugs makes development of new anti-malarials an urgent need. Over the past decade, we and others have shown that protein synthesis machinery is an excellent target for the development of new anti-infectives. In particular, several aminoacyl-tRNA synthetases (aaRS) have been validated as antimalarial drug targets. Given that aaRSs drive protein translation in all cells their inhibition tends to halt growth of an organism by stalling protein synthesis. Therefore, small molecule targeting of malaria (and pathogen) aaRS active sites is an attractive avenue from the perspective of developing novel anti-malarials. Our current project focuses on structure-function-drug studies on *P. falciparum* aaRSs. We have crystal structures of several enzyme-

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drug complexes including for prolyl- and lysyl-tRNA synthetases in complex with lead compounds including halofuginone, cladosporin and their derivatives. A recent extension of our work has validated orthologous aaRSs from eukaryotic pathogens like *T. gondii*, *S. mansoni*, and *L. loa* as valuable drug targets as well. In a major breakthrough, we validated the parasite encoded phenylalanine tRNA synthetase as a new focus for drugging based on a novel set of highly potent drug molecules. Hence, our structural parasitology projects directly address the following in context of eukaryotic pathogens (a) drug target validation, (b) structures of enzyme-drug complexes, (c) structure-based drug optimization, (d) structural basis for development of drug resistance, and (e) feasibility of new drug cocktails that target non-overlapping metabolic pathways.

Top 5 publications

1. Kato N, Comer E, Sakata-Kato T, Sharma A, Sharma M, Maetani M, Bastien J, Brancucci NM, Bittker JA, Corey V, Clarke D, Derbyshire ER, Dornan GL, Duffy S, Eckley S, Itoe MA, Koolen KM, Lewis TA, Lui PS, Lukens AK, Lund E, March S, Meibalan E, Meier BC, McPhail JA, Mitasev B, Moss EL, Sayes M, Van Gessel Y, Wawer MJ, Yoshinaga T, Zeeman AM, Avery VM, Bhatia SN, Burke JE, Catteruccia F, Clardy JC, Clemons PA, Dechering KJ, Duvall JR, Foley MA, Gusovsky F, Kocken CH, Marti M, Morningstar ML, Munoz B, Neafsey DE, **Amit Sharma**, Winzeler EA, Wirth DF, Scherer CA, Schreiber SL. Diversity-oriented synthesis yields novel multistage antimalarial inhibitors. **Nature**. 2016 Oct 20;538(7625):344-349. Doi 10.1038/nature19804. Epub 2016 Sep 7. PMID: 27602946; PMCID: PMC5515376.
2. Bhatt TK, Khan S, Dwivedi VP, Banday MM, Sharma A, Chandele A, Camacho N, Ribas de Pouplana L, Wu Y, Craig AG, Mikkonen AT, Maier AG, Yogavel M, **Amit Sharma***. Malaria parasite tyrosyl-tRNA synthetase secretion triggers pro-inflammatory responses. **Nature Communications** 2011 Nov 8;2:530. doi: 10.1038/ncomms1522. PMID: 22068597
3. Singh SK, Hora R, Belrhali H, Chitnis CE, **Amit Sharma***. Structural basis for Duffy recognition by the malaria parasite Duffy-binding-like domain. **Nature**. 2006 Feb 9;439(7077):741-4. doi: 10.1038/nature04443. Epub 2005 Dec 21. PMID: 16372020.
4. **Amit Sharma***, Sharma I, Kogkasuriyachai D, Kumar N. Structure of a gametocyte protein essential for sexual development in Plasmodium falciparum. **Nature Structural Biology**. 2003 Mar;10(3):197-203. doi: 10.1038/nsb899. PMID: 12577051.
5. Manmohan Sharma, Nipun Malhotra, Manickam Yogavel, Karl Harlos, Bruno Melillo, Eamon Comer, Arthur Gonse, Suhel Parvez, Branko Mitasev, Francis G. Fang, Stuart L. Schreiber and **Amit Sharma*** Structural basis of malaria

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parasite phenylalanine tRNA-synthetase inhibition by bicyclic azetidines. Final revision, **Nature Communications**, 2020.

Full list of publications:

1. Joshua B. Radke, Bruno Melillo, Manmohan Sharma, Payal Mittal, Yong Fu, **Amit Sharma**, Arthur Gonse, Eamon Comer, Stuart L. Schreiber, Anil Gupta, Arnab K. Chatterjee and L. David Sibley*. "Bicyclic azetidines target multiple life-cycle stages of *Toxoplasma gondii* by inhibiting parasite phenylalanyl t-RNA synthetase." *In revision, Nature Communications, 2021*
2. Manmohan Sharma, Nipun Malhotra, Manickam Yogavel, Karl Harlos, Bruno Melillo, Eamon Comer, Arthur Gonse, Suhel Parvez, Branko Mitasev, Francis G. Fang, Stuart L. Schreiber, and **Amit Sharma** "*Structural basis of malaria parasite phenylalanine tRNA-synthetase inhibition by bicyclic azetidines*", **Nature Communications**, 12, Article number: 343 (2021).
3. Ragavendra K, Verma V, Sharma VP, Kamaraju D, Rahi M, Chhibber-Goel, **Amit Sharma**. Insecticide resistance status in malaria vectors in 15 states of India: Its implications and way forward towards malaria elimination. *In final revision, Parasites and Vectors, 2021.*
4. Jasmita Gill, Soumyananda Chakraborti, **Amit Sharma**. Structural insights into global mutations in the ligand-binding domain of VAR2CSA and its implications on placental malaria vaccine. **Accepted, International Journal of Infectious Diseases, 2021**
5. Gaurav Kumar, Sanjeev Kumar Gupta, Manju Rahi, **Amit Sharma**. Challenges in understanding the bionomics of Indian malaria vectors. *Parasites and Vectors. In review, 2021.*
6. Rajendra Baharia^{1*}, CP Yadav¹, **Amit Sharma**. Malaria dynamics between 1987-2019 in Kheda district, Gujarat in western India, *In final revision, BMJ Global Health, 2021*
7. Rini Chaturvedi, Mradul Mohan, Sanjeev Kumar, Anmol Chandele, **Amit Sharma**. Profiles of host immune impairment in Plasmodium and SARS-CoV-2. **Accepted, Immunotargets and therapy, 2021.**

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8. Rahi M and **Amit Sharma**. Free market availability of rapid diagnostics will empower communities to eliminate malaria in India. **Accepted, Am. J. Trop. Med. Hyg. 2021**
9. Soumyananda Chakraborti, Jyoti Chhibber-Goel, **Amit Sharma**. Drug targeting aminoacyl-tRNA synthetases in *Anopheles spp* and *Aedes aegypti* that cause malaria and dengue. *In review, Parasites and Vectors, 2021.*
10. Sanjeev Kumar Gupta, Poonam Saroha, Kuldeep Singh, Rekha Saxena, Keshav Barman and **Amit Sharma**. Malaria epidemiology along the Indian districts bordering Bhutan and implications for malaria elimination in the region. **Accepted, American Journal of Medicine and Tropical Hygiene, 2021**
11. Sanjeev Kumar, Anmol Chandele, **Amit Sharma**. Current status of therapeutic monoclonal antibodies against SARS-CoV-2. **Accepted, PLoS Pathogens, 2021**
12. Bhowmick I, Chutia D.. et al, **Amit Sharma**, Manju Rahi, Chhibber-Goel. FeverTracker: validation of an mHealth technology platform for malaria surveillance in India. **Accepted, JMIR - mHealth and uHealth., 2021**
13. Das P and **Amit Sharma**. Deployment of telemedicine as another mitigation tool during the COVID-19 pandemic in India. **Accepted, Public Health in Practices, 2021**
14. Rini Chaturvedi, Chhibber-Goel, Sumit Malhotra, **Amit Sharma**. A perspective on SARS-CoV-2 and community transmission in the top COVID-19 affected nations. **Accepted, Journal of Global Health Reports, 2021**
15. R. Chaturvedi, S. Malhotra, **Amit Sharma**. Incidence, Treatments, and Outcomes of SARS-CoV-2 and HIV Co-infections. *Accepted, Journal of Global Health Reports, 2021.*
16. Chander Prakash Yadav, **Amit Sharma**. Malaria Dashboard: a digital platform for analysis and visualization of epidemiological data. *In review, 2021*
17. Malaria card: an empowering tool for patients and for epidemiological recording. *J Glob Heal Rep.* 2021. **Accepted, Journal of Global Health Reports, 2021**
18. Das P and **Amit Sharma**.. Deployment of telemedicine as another mitigation tool during the ongoing COVID-19 catastrophe in India. **Accepted, Public Health in Practice, 2021**

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19. Rahi M, Sharma S, Das P, Anvikar A, Pandey M, **Amit Sharma**. Connecting the dots to strengthen malaria elimination strategies in India: A MERA-India initiative. **Accepted, Indian Journal of Medical Research, 2021.**
20. Chhibber-Goel J, Malhotra S, Krishnan NMA, **Amit Sharma**. The profiles of first and second SARS-CoV-2 waves in the top ten COVID-19 affected countries. 2021. Journal of Global Health Reports. **Accepted, Journal of Global Health Reports, 2021**
21. Vinayak S, Jumani RS, Miller P, Hasan MM, McLeod BI, Tandel J, Stebbins EE, Teixeira JE, Borrel J, Gonse A, Zhang M, Yu X, Wernimont A, Walpole C, Eckley S, Love MS, McNamara CW, Sharma M, **Amit Sharma**, Scherer CA, Kato N, Schreiber SL, Melillo B, Striepen B, Huston CD, Comer E. Bicyclic azetidines kill the diarrheal pathogen *Cryptosporidium* in mice by inhibiting parasite phenylalanyl-tRNA synthetase. **Science Translational Medicine**. 2020 Sep 30;12(563):eaba8412. doi: 10.1126/scitranslmed.aba8412. PMID: 32998973.
22. Payal Mittal, Siddhartha Mishra, Sonalika kar, Veena Pande, Abhinav Sinha, **Amit Sharma**. *Global distribution of Single Amino Acid Polymorphisms in Plasmodium vivax Duffy binding-like domain and implications for vaccine development efforts*”, **Open Biol. (Royal Society Journal)**, 2020 Sep 30. Volume 10, Issue 9. doi:10.1098/rsob.200180. PubMed:32993415
23. Malhotra S, Rahi M, Das P, Chaturvedi R, Chhibber-Goel J, Anvikar A, Shankar H, Yadav CP, Meena J, Tewari S, Gopinath SV, Chhabra R, **Amit Sharma**. Epidemiological profiles and associated risk factors of SARS-CoV-2 positive patients based on a high-throughput testing facility in India. **Open Biology (Royal Society Journal)**. 2021 Jun;11(6):200288. doi: 10.1098/rsob.200288. Epub 2021 Jun 2. PMID: 34062097; PMCID: PMC8169211.
24. Chhibber-Goel, Yogavel M, **Amit Sharma**. Structural analyses of the malaria parasite aminoacyl-tRNA synthetases provide new avenues for antimalarial drug discovery. **Protein Sci**. 2021 Jun 28. doi: 10.1002/pro.4148. Epub ahead of print. PMID: 34184352.

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25. Nayak K, Gottimukkala K, Kumar S, Reddy ES, Edara VV, Kauffman R, Floyd K, Mantus G, Savargaonkar D, Goel PK, Arora S, Rahi M, Davis CW, Linderman S, Wrammert J, Suthar MS, Ahmed R, **Amit Sharma**, Murali-Krishna K, Chandele A. Characterization of neutralizing versus binding antibodies and memory B cells in COVID-19 recovered individuals from India. **Virology**. 2021 Jun;558:13-21. doi: 10.1016/j.virol.2021.02.002. Epub 2021 Mar 5. PMID: 33706207; PMCID: PMC7934698.
26. Kojom Foko LP, Arya A, **Amit Sharma**, Singh V. Epidemiology and clinical outcomes of severe Plasmodium vivax malaria in India. **J Infection** 2021 Jun;82(6):231-246. doi: 10.1016/j.jinf.2021.03.028. Epub 2021 Apr 5. PMID: 33831459.
27. Chaturvedi R, Chhibber-Goel J, Verma I, Gopinathan S, Parvez S, **Amit Sharma**. Geographical spread and structural basis of sulfadoxine-pyrimethamine drug- resistant malaria parasites. **Int J Parasitol**. 2021 Jun;51(7):505-525. doi: 10.1016/j.ijpara.2020.12.011. Epub 2021 Mar 26. PMID: 33775670.
28. Rahi M, Chaturvedi R, Das P, **Amit Sharma**. India can consider integration of three eliminable disease control programmes on malaria, lymphatic filariasis, and visceral leishmaniasis. **PLoS Pathog**. 2021 May 20;17(5):e1009492. doi: 10.1371/journal.ppat.1009492. PMID: 34015028; PMCID: PMC8136677.
29. Manju Rahi, Sundus Shafat Ahmad, **Amit Sharma**. Coverage enhancement and community empowerment via commercial availability of the long-lasting nets for malaria in India **Public Health in Practice** Volume 2, November 2021, 100133.
30. Babbar P, Sato M, Manickam Y, Mishra S, Harlos K, Gupta S, Parvez S, Kikuchi H, **Amit Sharma**. Inhibition of Plasmodium falciparum Lysyl-tRNA Synthetase via a Piperidine-Ring Scaffold Inspired Cladosporin Analogues. **ChemBiochem**. 2021 May doi: 10.1002/cbic.202100212. Epub ahead of print. PMID: 33969584.
31. Monika Pandey, Manju Rahi, **Amit Sharma**. The Indian burden of malaria in pregnancy needs assessment. **Med, (Cell press)** Volume 2, Issue 5, 14 May 2021, Pages 464-469

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32. Ranjha R, **Amit Sharma**. Forest malaria: the prevailing obstacle for malaria control and elimination in India. **BMJ Glob Health**. 2021 May;6(5):e005391. doi: 10.1136/bmjgh-2021-005391. PMID: 33990358; PMCID: PMC8127975.
33. Babbar P, Das P, Manickam Y, Mankad Y, Yadav S, Parvez S, **Amit Sharma**, Reddy DS. Design, Synthesis, and Structural Analysis of Cladosporin-Based Inhibitors of Malaria Parasites. **ACS Infect Dis**. 2021 Apr 12. doi:10.1021/acsinfecdis.1c00092. Epub ahead of print. PMID: 33843204.
34. Rahi M, Das P, **Amit Sharma**. Malaria elimination in India requires additional surveillance mechanisms. **J Public Health (Oxford)**. 2021 Apr 5:fdab106. doi: 10.1093/pubmed/fdab106. Epub ahead of print. PMID: 33823023.
35. Chhibber-Goel J, Gopinathan S, **Amit Sharma**. Interplay between severities of COVID-19 and the gut microbiome: implications of bacterial co-infections? **Gut Pathog**. 2021 Feb 25;13(1):14. doi: 10.1186/s13099-021-00407-7. PMID: 33632296; PMCID: PMC7906082.
36. Ahmad SS, Rahi M, **Amit Sharma**. Relapses of Plasmodium vivax malaria threaten disease elimination: time to deploy tafenoquine in India? **BMJ Glob Health**. 2021 Feb;6(2):e004558. doi: 10.1136/bmjgh-2020-004558. PMID: 33619041; PMCID: PMC7903102.
37. Chaturvedi R, Malhotra S, **Amit Sharma**. Epidemiological profiles of SARS-CoV and SARS-Cov-2 in Singapore and its promising containment strategies. **J Glob Health**. 2021 Jan 30;11:03027. doi: 10.7189/jogh.11.03027. PMID: 33692882; PMCID: PMC7914380.
38. Rahi M, Baharia RK, Das P, Chhibber-Goel J, **Amit Sharma**. Overlaying COVID-19 mitigation plans on malaria control infrastructures. **Trans R Soc Trop Med Hyg**. 2021 Jan 7;115(1):6-8. doi: 10.1093/trstmh/traa108. PMID: 33045049; PMCID: PMC7665786.
39. Sharma M, Malhotra N, Yogavel M, Harlos K, Melillo B, Comer E, Gonse A, Parvez S, Mitasev B, Fang FG, Schreiber SL, **Amit Sharma**. Structural basis of malaria parasite phenylalanine tRNA-synthetase inhibition by bicyclic azetidines. **Nature**

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Communications. 2021 Jan 12;12(1):343. doi: 10.1038/s41467-020-20478-5. PMID: 33436639; PMCID: PMC7803973.

40. Ravinder R, Singh S, Bishnoi S, Jan A, **Amit Sharma**, Kodamana H, Krishnan NMA. An adaptive, interacting, cluster-based model for predicting the transmission dynamics of COVID-19. **Heliyon (Cell press)**. 2020 Dec 14;6(12):e05722. doi: 10.1016/j.heliyon.2020.e05722. PMID: 33367130; PMCID: PMC7749387.
41. Singh A, Kataria S, Das P, **Amit Sharma**. A proposal to make the pulse oximetry as omnipresent as thermometry in public health care systems. **J Glob Health**. 2020 Dec;10(2):0203102. doi: 10.7189/jogh.10.0203102. PMID: 33335722; PMCID: PMC7723415.
42. Rahi M, **Amit Sharma**. For malaria elimination India needs a platform for data integration. **BMJ Glob Health**. 2020 Dec;5(12):e004198. doi: 10.1136/bmjgh-2020-004198. PMID: 33380414; PMCID: PMC7780526.
43. Chowdhary A, Tarai B, Singh A, **Amit Sharma**. Multidrug-resistant *Candida auris* infections in critically ill coronavirus disease patients, India, April–July 2020. **Emerging Infectious Diseases**. 2020 Nov. DOI: 10.3201/eid2611.203504
44. Chaturvedi R, Deora N, Bhandari D, Parvez S, Sinha A, **Amit Sharma**. Trends of neglected *Plasmodium* species infection in humans over the past century in India. **One Health**. 2020 Oct 28;11:100190. doi: 10.1016/j.onehlt.2020.100190. PMID: 33251321; PMCID: PMC7683271.
45. Vinayak S, Jumani RS, Miller P, Hasan MM, McLeod BI, Tandel J, Stebbins EE, Teixeira JE, Borrel J, Gonse A, Zhang M, Yu X, Wernimont A, Walpole C, Eckley S, Love MS, McNamara CW, Sharma M, **Amit Sharma**, Scherer CA, Kato N, Schreiber SL, Melillo B, Striepen B, Huston CD, Comer E. Bicyclic azetidines kill the diarrheal pathogen *Cryptosporidium* in mice by inhibiting parasite phenylalanyl-tRNA synthetase. **Science Translational Medicine**. 2020 Sep 30;12(563):eaba8412. doi: 10.1126/scitranslmed.aba8412. PMID: 32998973.

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46. Mohan M, Cherian JJ, **Amit Sharma**. Exploring links between vitamin D deficiency and COVID-19. **PLoS Pathogens**. 2020 Sep 18;16(9):e1008874. doi:10.1371/journal.ppat.1008874. PMID: 32946517; PMCID: PMC7500624.
47. Rahi M, **Amit Sharma**. Mass vaccination against COVID-19 may require replays of the polio vaccination drives. **EClinicalMedicine (Lancet)**. 2020 Aug;25:100501. doi:0.1016/j.eclinm.2020.100501. Epub 2020 Aug 18. PMID: 32835187; PMCID:PMC7431317.
48. Rahi M, Das P, **Amit Sharma**. COVID-19 Mitigation Steps Provide a Blueprint for Malaria Control and Elimination. **Am J Trop Med Hyg**. 2020 Jul;103(1):28-30. doi: 0.4269/ajtmh.20-0394. Epub 2020 May 7. PMID: 32383431; PMCID: PMC7263537.
49. Chowdhary A, **Amit Sharma**. The lurking scourge of multidrug resistant *Candida auris* in times of COVID-19 pandemic. **J Glob Antimicrob Resist**. 2020 Jun 12;22:175-176. doi: 10.1016/j.jgar.2020.06.003. Epub ahead of print. PMID: 32535077; PMCID: PMC7289732.
50. Chhibber-Goel J, Joshi S, **Amit Sharma**. Aminoacyl tRNA synthetases as potential drug targets of the *Panthera* pathogen *Babesia*. **Parasite Vectors**. 2019 Oct 14;12(1):482. doi: 10.1186/s13071-019-3717-z. PMID: 31610802; PMCID: PMC6792207.
51. Goel P, Parvez S, **Amit Sharma**. Genomic analyses of aminoacyl tRNA synthetases from human-infecting helminths. **BMC Genomics**. 2019 May 2;20(1):333. doi: 0.1186/s12864-019-5679-0. PMID: 31046663; PMCID: PMC6498573.
52. Baragaña B, Forte B, Choi R, Nakazawa Hewitt S, Bueren-Calabuig JA, Pisco JP, Peet C, Dranow DM, Robinson DA, Jansen C, Norcross NR, Vinayak S, Anderson M, Brooks CF, Cooper CA, Damerow S, Delves M, Dowers K, Duffy J, Edwards TE, Hallyburton I, Horst BG, Hulverson MA, Ferguson L, Jiménez-Díaz MB, Jumani RS, Lorimer DD, Love MS, Maher S, Matthews H, McNamara CW, Miller P, O'Neill S, Ojo KK, Osuna-Cabello M, Pinto E, Post J, Riley J, Rottmann M, Sanz LM, Scullion P, Sharma A, Shepherd SM, Shishikura Y, Simeons FRC, Stebbins EE, Stojanovski L, Straschil U, Tamaki FK, Tamjar J, Torrie LS, Vantaux A, Witkowski B, Wittlin S, Yogavel M, Zuccotto F, Angulo-Barturen I, Sinden R, Baum J, Gamo FJ, Mäser P, Kyle DE, Winzeler EA, Myler PJ,

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- Wyatt PG, Floyd D, Matthews D, **Amit Sharma**, Striepen B, Huston CD, Gray DW, Fairlamb AH, Pislakov AV, Walpole C, Read KD, Van Voorhis WC, Gilbert IH. Lysyl-tRNA synthetase as a drug target in malaria and cryptosporidiosis. **Proc Natl Acad Sci U S A**. 2019 Apr 2;116(14):7015-7020. doi: 10.1073/pnas.1814685116. Epub 2019 Mar 20. PMID: 30894487; PMCID: PMC6452685.
53. Chhibber-Goel J, **Amit Sharma**. Side chain rotameric changes and backbone dynamics enable specific cladosporin binding in Plasmodium falciparum lysyl-tRNA synthetase. **Proteins**. 2019;87:730–737. <https://doi.org/10.1002/prot.25699>
54. Mishra S, Malhotra N, Kumari S, Sato M, Kikuchi H, Yogavel M, **Amit Sharma**. Conformational heterogeneity in apo and drug-bound structures of Toxoplasma gondii prolyl-tRNA synthetase. **Acta Crystallogr F Struct Biol Commun**. 2019 Nov 1;75(Pt 11):714-724. doi: 10.1107/S2053230X19014808. Epub 2019 Nov 7. PMID: 31702585; PMCID: PMC6839821.
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