

Resume

Faiza Amber Siddiqui

Research Associate,
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SUMMARY:

Highly versatile research scientist with over 10 years of hands-on experience conducting experiments in infectious biology and parasitology, Bioinformatics, Echocardiography including a recent leadership role at one of the world's leading research universities.

RESEARCH EXPERIENCE:

Research Associate: (October 2018 to Present)

Dr. Liwang Cui, Department of Internal Medicine, University Of South Florida (USF), Tampa, FL, USA.

Postdoctoral Scholar: (July 2015 to September 2018)

Dr. Liwang Cui, Department of Entomology, Penn State University (PSU), State College, PA, USA.

Research Associate: (August 2013 to May 2015)

Dr. Chetan Chitnis laboratory, International Center for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India.

Doctor of Philosophy (PhD, August 2008-March 2014)

International Center for Genetic Engineering and Biotechnology (ICGEB), Jawaharlal Nehru University (JNU), New Delhi, India

Thesis title:- "Role of PTRAMP (*Plasmodium* thrombospondin related apical merozoite protein) in invasion of RBCs by *Plasmodium*."

In my graduate research, I studied the role of the protein *Plasmodium* thrombospondin related apical merozoite protein (PTRAMP) in the blood stage of the malaria parasite life cycle. My work shows that PfTRAMP is expressed in all blood stages of the *P. falciparum* life cycle and is localized to the bulb of rhoptries, an apical secretory organelle. Further, I show that PfTRAMP gets secreted at the time of invasion of red blood cell and binds to red blood cell membrane. Sequence comparison of PfTRAMP from ten different fields and lab isolates showed that PfTRAMP protein sequence is highly conserved. Furthermore, antibodies raised against PfTRAMP inhibit invasion of the parasite into the host red blood cell. Thus my doctoral work suggests that PfTRAMP is a very attractive vaccine candidate for *P. falciparum* control.

Research Trainee, Dec 2007 to May 2008

National Institute of Immunology, New Delhi, India

Dissertation title: "Cloning, expression and characterization of a recombinant PKS protein of *Mycobacterium tuberculosis*." (As a part of M.Sc. Program)

Research Trainee, July 2006 to December 2006

JamiaHamdard University, New Delhi, India

Dissertation title: “**Hepatotoxicity induced by Aflatoxins in Swiss Albino mice.**”

(As a part of B.Sc. Program).

ACADEMIC QUALIFICATIONS:

1. **Doctor Of Philosophy (PhD) (Aug 2008 to March 2014)**

International Center for Genetic Engineering and Biotechnology (ICGEB)-Jawaharlal Nehru University (JNU), New Delhi, India

2. **Master of Science (M.S.) in Biotechnology (July 2006 to June 2008)**

JamiaMilliaIslamia University, New Delhi, India

3. **Bachelor of Science (B.S., Gold Medalist) in Biotechnology (July 2003 to June 2006)**

JamiaMilliaIslamia University, New Delhi, India

MEMBERSHIP:

1. International Society of Infectious Diseases (ISID)
2. American Society of Tropical Medicine and Hygiene (ASTMH)
3. Genetics Society of America (GSA)

GOOGLE PROFILE:

https://scholar.google.com/citations?user=bAZGn_QAAAAJ&hl=en

FELLOWSHIPS AND AWARDS:

1. Won the **fourth prize** for the National flash talk competition organized by Research America, September, 2021, USA.
2. Awarded the **first Prize** at the Postdoctoral Research Symposium, September 2019, organized by the University of South Florida, USA.
3. Awarded **first prize** for Poster presentation in the 3rd Annual Life Science Symposium at Pennsylvania State University, USA, May 2018
4. Awarded **third Prize** for Poster presentation in the Postdoc Research Exhibition at Pennsylvania State University, USA, 2017
5. Awarded registration and travel bursary for attending Gordon research seminar: Host-Parasite Interactions, 2016 at Salve Regina University in Newport RI, United States
6. Awarded Travel Bursary for attending Research Opportunities Week at Technical University of Munich, Germany 2015.
7. Awarded **third prize** for oral presentation in the BIOSPARKS-2014, Jawaharlal Nehru University, Delhi, India
8. Awarded **second prize** in a poster presentation in the One day Symposium on "Emerging Trends in Translational Research in India" held in April, 2014 at the Shiv Nadar University campus, UP, India
9. Awarded a travel bursary for attending the Wellcome Trust Advanced Course: Malaria Experimental Genetics Workshop, 2013, at Wellcome trust, Hinxton, UK
10. Awarded a travel bursary for attending the Gordon research conference: Molecular and Cell Biology of Malaria, 2013, Lucca, Italy
11. Awarded a travel bursary for attending the Science and Communication workshop, DBT, 2013, Hyderabad, India
12. My team was shortlisted in the top 20 teams of ABLE-BEST 2013 Bio-entrepreneurial workshop, Bangalore, India
13. Awarded **first prize** for Poster presentation in BioWorld 2012, International Conference for Proteins in Disease and Disorder, 2012, Indian Institute of Technology (IIT) Delhi, India

14. Qualified GATE-2008 with 97.07 percentile.
15. Qualified Department of Biotechnology, Govt. Of India-Junior Research Fellow (DBTJRF) fellowship 2008 (Department of Biotechnology, India)
16. Qualified Council for Scientific and Industrial Research, India Junior Research fellow (CSIR-JRF) fellowship 2008
17. Topper& Gold medalist in B.Sc. Biotechnology, Jamia Millia Islamia
18. Topped in Jamia Millia Islamia B.Sc. Biotechnology entrance exam
19. Was the Class representative for three years in B.Sc. Biotechnology at Jamia Millia Islamia, Delhi, India
20. Topped in school in Senior Secondary school Board examination (Rabea Girls Public School)

POSTER & ORAL PRESENTATIONS:

1. Oral presentation at the Annual meeting 2021 of the American Society of Tropical Medicine and Hygiene, USA, virtual meeting.
2. Oral presentation in Virtual March Malaria Madness Meeting (vM4) | March 12-13, 2021, University of Central Florida, Orlando, FL
3. Oral presentation at the 1st PArACon2018 (Pennsylvania Parasitology Conference) at Pennsylvania State University, USA, July 2018
4. Oral and Poster presentation at the 3rd Annual Life Science Symposium at Pennsylvania State University, USA, May 2018
5. Poster presentation at The World Malaria Day symposium 2018, “Malaria Drug Development and Resistance”, Baltimore, MD, USA
6. Poster presentation at the 66th Annual meeting 2017 of the American Society of Tropical Medicine and Hygiene, Baltimore, MD, USA
7. Oral presentation at Gordon research seminar: Host-Parasite Interactions, 2016 at Salve Regina University in Newport RI, United States
8. Poster presentation at Molecular Parasitology Meeting 2016 in Marine Biology Laboratory, Woods Hole, MA, USA
9. One day Symposium on "Emerging Trends in Translational Research in India" 2014 at the Shiv Nadar University campus, UP, India
10. International Scientific Meeting, Recent development in Malaria Parasite Biology, 2013, New Delhi.
11. Gordon research conference: Molecular and Cell Biology of Malaria, 2013, Lucca, Italy
12. Gordon research seminar: Malaria, 2013, Lucca, Italy
13. BioWorld 2012, International Conference for Proteins in Disease and Disorder, 2012, Indian Institute of Technology Delhi, India
14. Oral presentation in the BIOSPARKS-2014, Jawaharlal Nehru University, Delhi, India
15. Oral presentation in Science and Communication workshop, DBT, 2013, Hyderabad
16. Oral presentation in ABLE-BEST 2013 Bio-entrepreneurial workshop, Bangalore, India

PARTICIPATION IN INTERNATIONAL CONFERENCES/WORKSHOPS:

1. Attended the March Malaria Madness meeting, April 2022, St Petersburg, FL, USA
2. Attended the Annual meeting 2021 of the American Society of Tropical Medicine and Hygiene, USA, virtual meeting.
3. Attended the Molecular Parasitology Meeting MPM XXXII, October 5-9, 2021, USA.
4. Attended the USF Summer Grant Writing workshop, 2021, USF, Florida, USA.
5. Attended the 2021 National Health Research Forum, organized by Research America, September, 2021.
6. Attended the Summit “Reaching the Peak: A Science & Technology Career Summit”, June, 2021, organized by Research America, USA.

7. Attended Virtual Symposium on Advances in Malaria Research (MALARIA-2021), July, 2021, USA.
8. Served as a **JUDGE** for poster presentation of Graduate and undergraduate students in the USF health research day 2021, USF.
9. Future of Malaria Research Symposium, November, 2020, Johns Hopkins Malaria Research Institute, Baltimore, USA, virtual meeting.
10. Poster presentation at Molecular Parasitology Meeting XXXI 2020, virtual meeting USA
11. 69th Annual meeting 2020 of the American Society of Tropical Medicine and Hygiene, USA, virtual meeting.
12. The Genomics of Global and Planetary Health Annual Symposium March, 2019, University of South Florida, Tampa, USA
13. The World Malaria Day symposium 2018, “Malaria Drug Development and Resistance”, Baltimore, MD, USA
14. Molecular Parasitology Meeting 2016 in Marine Biology Laboratory, Woods Hole, MA, USA
15. Gordon research seminar: Host-Parasite Interactions, 2016 at Salve Regina University in Newport RI, United States of America (USA).
16. Participated in the Postdoc Research Exhibition as **JUDGE** at Pennsylvania State University, USA, 2016
17. Participated as a **JUDGE** in the 82nd Annual Pennsylvania Junior Academy of Science (PJAS) competition, May 2016, University Park campus, Pennsylvania State University, USA.
18. Participated as a **JUDGE** for the Gamma Sigma Delta/College of Agricultural Science Research Exposition, March 2016, at Pennsylvania State University, USA.
19. Participated as a **JUDGE** for the Poster and Visual Arts Option of the 31st Annual Graduate Exhibition, March 2016, Pennsylvania State University, USA.
20. Participated in the Postdoc Research Exhibition as **JUDGE** at Pennsylvania State University, USA, 2015.
21. Attended Illumina Sequencing Seminar at Pennsylvania State University, USA, 2015.
22. Research Opportunities Week at Technical University of Munich, Germany 2015.
23. BIOSPARKS-2014, Jawaharlal Nehru University, Delhi, India
24. Wellcome Trust Advanced Course: Malaria Experimental Genetics, 2013, Wellcome trust, Hinxton, UK
25. Gordon research conference: Molecular and Cell Biology of Malaria, 2013, Lucca, Italy
26. Gordon research seminar: Malaria, 2013, Lucca, Italy
27. NIKON Confocal Microscopy Workshop, March 2010, New Delhi
28. International Scientific Meeting, Recent development in Malaria Parasite Biology, 2013, New Delhi
29. ABLE-BEST 2013 entrepreneurial workshop, 2013, Bangalore, India
30. Science and Communication workshop, DBT, 2013, Hyderabad
31. BioWorld 2012, International Conference for Proteins in Disease and Disorder, 2012, Indian Institute of Technology Delhi, India
32. Final MALSIG meeting, 2012, Hotel Claridges, Surajkund Delhi, India.
33. International Scientific meeting: Recent Developments in Malaria Research, 2010, International Centre for Genetic Engineering and Biotechnology, New Delhi, India
34. Proteomics: Applications of Mass spectrometry in Biology, 2009, International Centre for Genetic Engineering and Biotechnology, New Delhi, India
35. Bioinformatics of intracellular pathogens, 2009, Jawaharlal Nehru University, New Delhi, India
36. Theoretical and Practical Course: Molecular Methods in Malaria Research, 2008, International Centre for Genetic Engineering and Biotechnology, New Delhi, India

PUBLICATIONS:

1. **Siddiqui FA**, Dhawan S, Singh S, Singh B, Gupta P, Pandey A, Mohammed A, Gaur D and Chitnis CE Functional Characterization of a Thrombospondin Structural Repeat Containing Rhopty Protein from *Plasmodium falciparum* merozoites. 2013 Cell Microbiol. Impact Factor:**4.92**. Citation:**29**
2. Pandey AK, Reddy KS, Sahar T, Gupta S, Singh H, Reddy EJ, Asad M, **Siddiqui FA**, Gupta P, Singh B, More KR, Mohammed A, Chitnis CE, Chauhan VS, Gaur D. Identification of a potent combination of key *Plasmodium falciparum* merozoite antigens that elicit strain transcending parasite neutralizing antibodies. 2012 Infect Immun. Impact Factor:**3.94** Citation:**48**
3. Dawn A, Singh S, **Siddiqui FA**[#], More KR[#], Pachikara N, Ramdani G, Langsley G, Chitnis CE. The Central Role of cAMP in Regulating Plasmodium falciparum Merozoite Invasion of Human Erythrocytes. 2014 PLoS Pathog. Impact Factor:**7.00** Citation:**54**
4. Alam M[#], Solyakov L[#], Bottrill AR, Flueck C, **Siddiqui FA**, Singh S, Mistry S, Viskaduraki M, Chitnis CE, Doerig C, Moon RW, Green JL, Holder AA, Baker DA, Tobin AB. Global phospho-proteomic analysis reveals PfPKG as a signalling hub that regulates malaria parasite egress and erythrocyte invasion. Nature Communication Nat. Comm. 2015. Impact Factor:**11.32** Citation:**63**
5. Hati S, Madurkar SM, Bathula C, Thulluri C, Agarwal R, **Siddiqui FA**, Dangi P, Adepally U, Singh A, Singh S, Sen S. Design, synthesis and biological evaluation of small molecules as potent glucosidase inhibitors. Eur J Med Chem. 2015. Impact Factor:**3.90**. Citation:**08**
6. Wang M, **Siddiqui FA**, Fan Q, Luo E, Cao Y, Cui L. Limited Genetic Diversity in the PvK12 Kelch protein in *Plasmodium vivax* isolates from Southeast Asia. Malaria Journal 2016. Impact Factor:**3.11** Citation:**08**.
7. Hu G, Zhang Y, Fan M, Wang M, **Siddiqui FA**, Wang Y, Sun W, Sun F, Zhang D, Lei W, Sun X. Evaluation of fetal cardiac valve anomalies by four-dimensional echocardiography with spatiotemporal image correlation (4D STIC). Echocardiography, 2016. Impact Factor:**1.25** Citation:**04**
8. **Siddiqui FA**. Malaria Control and Elimination: How Far we are: An Opinion Article. Journal of Biometrics & Biostatistics 2016. Impact Factor:**1.59** Citation:00
9. **Siddiqui FA**, Cabrera M, Wang M, Wang Z, Brashear A, Miao J, Dong G, Cui L. *Plasmodium falciparum* Falcipain 2a polymorphism in Southeast Asia and its Contribution to Artemisinin resistance. JID 2018. Impact Factor:**6.2** Citation:**04**.
10. HGN Mbenda, W Zeng, Y Bai, **Siddiqui FA**, Z Yang, L Cui. Genetic diversity of the Plasmodium vivax phosphatidylinositol 3-kinase gene in two regions of the China-Myanmar border. Infection, Genetics and Evolution, 2018. Impact Factor:**2.5** Citation:**02**.
11. Liang X, Hart KJ, Dong G, **Siddiqui FA**, Sebastian A, Li X, Albert I, Miao J, Lindner SE, Cui L. Puf3 participates in ribosomal biogenesis in malaria parasites. J Cell Sci. 2018. Impact Factor:**4.4** Citation:**01**.
12. Sun X, Zhang Y, Fan M, Wang Y, Wang M, **Siddiqui FA**, Sun W, Sun F, Zhang D, Lei W, Hu G "Role of four-dimensional echocardiography with high-definition flow imaging and spatiotemporal image correlation in detecting fetal pulmonary veins".

Echocardiography, 2016. Impact Factor:**1.25**Citation:**02**.

13. Zhang Y, Sun X, Lei W, Wang Y, **Siddiqui FA**. Two- and four-dimensional echocardiography with high-definition flow imaging and spatiotemporal image correlation in the diagnosis of fetal isolated partial anomalous pulmonary venous connection. Echocardiography, 2018. Impact Factor:**1.25**Citation:**00**.
14. Wang Y; Fan M; **Siddiqui FA**, Wang M, Sun W, Sun X, Lei W, Zhang Y. Prenatal screening of fetal ventriculoarterial connections: benefits of 4D technique in fetal heart imaging. Cardiovascular Ultrasound. 2017. Impact Factor:**1.74** Citation:**00**.
15. Lei W, Sun X, **Siddiqui FA**, Wang Y, Zhang Y. Prenatal diagnosis of fetal absent pulmonary valve syndrome by two- and three-dimensional echocardiography. Echocardiography, 2018. Impact Factor:**1.25**Citation:**00**.
16. Wang Y, Fan M, **Siddiqui FA**, Wang M, Sun W, Sun X, Lei W, Zhang Y. Strategies for Accurate Diagnosis of Fetal Aortic Arch Anomalies: Benefits of Three-Dimensional Sonography with Spatiotemporal Image Correlation and a Novel Algorithm for Volume Analysis. Journal of the American Society of Echocardiography, 2018. Impact factor: **6.80**. Citation:00
17. Zhang J[#], Li N[#], **Siddiqui FA**[#], Xu S, Geng J, Zhang J, He X, Zhao L, Pi L, Zhang Y, Li C, Chen X, Wu Y, Miao J, Cao Y, Cui L, Yang Z. *In vitro* susceptibility of *Plasmodium falciparum* isolates from the China-Myanmar border area to artemisinins and correlation with K13 mutations. 2019 International Journal for Parasitology: Drugs and Drug Resistance. Impact Factor:2.95. Citation: 00.
18. **Siddiqui FA**, Boonhok R, Cabrera M, Mbenda HGN, Wang M, Min H, Liang X, Qin J, Zhu X, Miao J, Cao Y, Cui L. Role of Plasmodium falciparum Kelch 13 Protein Mutations in *P. falciparum* Populations from Northeastern Myanmar in Mediating Artemisinin Resistance. 2020 Mbio 11 (1).
19. Mbenda HGN, Wang M, Guo J, **Siddiqui FA**, Hu Y, Yang Z, Kittichai V, Sattabongkot J, Cao Y, Jiang L, Cui L. Evolution of the *Plasmodium vivax* multidrug resistance 1 gene in the Greater Mekong Subregion during malaria elimination. 2020. Parasites & vectors 13 (1), 67.
20. Zhao Y, Ziling Liu, Soe MT, Wang L, Soe TN, Wei H, Than A, Aung PL, Li Y, Zhang X, Hu Y, Wei H, Zhang Y, Burgess J, **Siddiqui FA**, Menezes L, Wang Q, Kyaw MP, Cao Y, Cui L. Genetic Variations Associated with Drug Resistance Markers in Asymptomatic *Plasmodium falciparum* Infections in Myanmar. 2019 Genes 10 (9), 692.
21. Brashear A, Roobsoong W, **Siddiqui FA**, Nguitrango W, Sattabongkot J, Lopez-Urbe M, Miao J, Cui L. A glance of the blood stage transcriptome of a Southeast Asian Plasmodium ovale isolate. 2019 PLoS neglected tropical diseases 13 (11).
22. Li J, Zhang J, Li Q, Hu Y, Ruan Y, Tao Z, Xia H, Qiao J, Meng L, Zeng W, Li C, He X, Zhao L, **Siddiqui FA**, Miao J, Yang Z, Fang Q, Cui L. *Ex vivo* susceptibilities of Plasmodium vivax isolates from the China-Myanmar border to antimalarial drugs and association with polymorphisms in Pvmdr1 and Pvcr1-o genes. 2020 PLoS Neglected Tropical Diseases 14 (6), e0008255

23. Si Y, Zeng W, Li N, Wang C, **Siddiqui FA**, Zhang J, Pi L, He X, Zhao L, Wang S, Zhao H, Li X, Yang Q, Miao J, Yang Z, Cui L. *In Vitro* Susceptibility of *Plasmodium falciparum* Isolates from the China–Myanmar Border Area to Piperaquine and Association with Candidate Markers. *Antimicrobial Agents and Chemotherapy*.
24. **Siddiqui FA**, Liang X, Cui L. *Plasmodium falciparum* resistance to ACTs: emergence, mechanisms, and outlook. *International Journal for Parasitology: Drugs and Drug Resistance*, 2021.
25. Liang X, **Siddiqui FA**, Li W, Wang C, Gibbons J, Miao J, Qin J, Li X, Zhao C, Brashear A, Cabrera M, Li J, Cui L. Phenotypic and Genotypic Analysis of Dihydroartemisinin-Resistant Malaria Parasites *Plasmodium falciparum*. (Manuscript under preparation)