

## Dr. Rajesh Chandramohanadas's Representative Publications (\* Corresponding Author)

### Research Publications

- 2021 Banas A\*, Banas K , Chu TT , Naidu R, Hutchinson P, Agrawal R, Lo M , Kansiz M , Chandramohanadas R\* and Breese M. *Do we really need sub-micron resolution to analyse single cell molecular features through vibrational spectroscopy? A pilot study using Plasmodium falciparum-infected Human Erythrocytes".* (Pre-print: <https://www.researchsquare.com/article/rs-294029/v1>).
- 2021 Loh DR, Yong WX, Yapeter J, Karupppasamy S and Chandramohanadas R\*. *A Deep Learning Approach to the Diagnosis of Malaria Infection: Automated and Rapid Cell Counting, Object Detection and Instance Segmentation using Mask-RCNN. **Computerized Medical Imaging and Graphics** 2021 Mar;88:101845. doi: 10.1016/j.compmedimag.2020.101845.*
- 2020 Indari O, Chandramohanadas R, Jha HC. *Epstein-Barr virus infection modulates blood-brain barrier cells and its co-infection with Plasmodium falciparum induces RBC adhesion. **Pathogens and Disease**, 2020 Dec 23: ftaa080.*
- 2020 Tayebi M, Zhou Y, Tripathi P, Chandramohanadas R and Ai Y. *Exosome Purification and Analysis Using a Facile Microfluidic Hydrodynamic Trapping Device. **Analytical Chemistry**. 2020 Jul 2. doi: 10.1021/acs.analchem.0c02006.*
- 2020 Patra A, Hingamire T, Belekar M, Xiong A, Subramanian G, Bozdech Z, Preiser P, Shanmugam D and Chandramohanadas R\*. *Whole Cell Phenotypic Screening Of MMV Pathogen Box identifies Specific Inhibitors of Plasmodium falciparum merozoite maturation and egress, **Antimicrobial Agents & Chemotherapy**, 2020 Apr 21;64(5). pii: e01802-19. doi: 10.1128/AAC.01802-19.*
- 2019 Subramanian G, Sadeer A, Naidu R, Mukherjee K, Tripathi A, Pullarkat S and Chandramohanadas R\*. *Evaluation of ferrocenyl phosphines as potent antimalarials targeting the digestive vacuole function of Plasmodium falciparum, **Dalton Transactions**. 2019 Jan 3. doi: 10.1039/c8dt04263b.*
- 2018 Zhang R, Lim CT\*, Dao M\* and Chandramohanadas R\*. *Febrile Temperature Elevates the Expression of Phosphatidylserine on Plasmodium falciparum (FCR3CSA) Infected Red Blood Cell Surface Leading to Increased Cytoadhesion, **Scientific Reports** 2018 Oct 9;8(1): 15022. doi: 10.1038/s41598-018-33358-2.*
- 2018 Naidu R, Subramanian G, Lim BY, Lim CT and Chandramohanadas R\*. *A Reference Document on permissible limits for solvents and buffers during in vitro Antimalarial screening, **Scientific Reports** 2018 Oct 8;8(1): 14974. doi: 10.1038/s41598-018-33226-z.*
- 2018 Li H, Yang J, Chu TT, Naidu R, Chandramohanadas R, Dao M and Karniadakis G. *Cytoskeleton remodeling induces membrane stiffness and instability changes as reticulocytes mature, **Biophysical Journal**, April 2018. 114(8):2014-2023. doi: 10.1016/j.bpj.2018.03.004.*
- 2018 Tong JX, Chandramohanadas R and Tan KSW. *High Content Screening of MMV Pathogen Box for Plasmodium falciparum Digestive Vacuole Disrupting Molecules Reveals Potential Starting Points for Drug Discovery, **Antimicrobial Agents and Chemotherapy**. pii: AAC.02031-17. doi: 10.1128/AAC.02031-17.*
- 2018 Chu TT, Sinha A, Malleret B, Suwanarusk B, Park EJ, Naidu R, Das R, Dutta B, Ong ST, Verma NK, Chan JK, Nosten F, Rénia L, Sze SK, Russell B & Chandramohanadas R\*. *Quantitative Mass Spectrometry of Human Reticulocytes Reveal Proteome-wide Modifications During Maturation, **British Journal of Haematology**, 180(1): 118-133.*
- 2018 Subramanian S, Belekar MA, Shukla A Tong JX, Sinha A, Chu TT, Kulkarni AS, Preiser PR, Reddy DS, Tan KSW, Shanmugam D and Chandramohanadas R\*. *Targeted phenotypic screening in Plasmodium falciparum and Toxoplasma gondii reveals novel modes of action for MMV Malaria Box molecules, **mSphere** 2018 Jan 17;3(1). pii: e00534-17.*
- 2017 Yang D, Subramanian G, Duan J, Gao S, Bai L, Chandramohanadas R\* & Ai Y\*. *A portable*

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- 2017 Aniweh Y, Gao X, Hao P, Meng W, Lai SK, Gunalan K, Chu TT, Sinha A, Lescar J, Chandramohanadas R, Li HY, Sze SK, Preiser PR. *P. falciparum* RH5-Basigin interaction induces changes in the cytoskeleton of the host RBC, **Cell Microbiol**. 2017 Apr 13. doi: 10.1111/cmi.12747.
- 2016 Subramanian G, Babu Rajeev CP, Mohan CD, Sinha A, Chu TT, Sebastian A, Ximei H, Fuchs JE, Bender A, Rangappa KS, Basappa\* & Chandramohanadas R\*. *Synthesis and in vitro evaluation of hydrazinyl phthalazines against malaria parasite, Plasmodium falciparum*, **Bioorganic and Medicinal Chemistry Letters** 2016; 26 (14): 3300-6.
- 2016 Dearnley M, Chu T, Zhang Y, Looker O, Huang C, Klonis N, Yeoman J, Kenny S, Arora M, Osborne JM, Chandramohanadas R\*, Zhang S\*, Dixon MW\*, Tilley L\*. *Reversible host cell remodeling underpins deformability changes in malaria parasite sexual blood stages*, **Proceedings of the National Academy of Sciences**, 2016; 113 (17): 4800-5.
- 2016 Cho JS, Russell B, Kosasaivee V, Zhang R, Colin Y, Bertrand O, Chandramohanadas R, Chu CS, Nosten F, Renia L, Malleret B. *Unambiguous determination of Plasmodium vivax reticulocyte invasion by flow cytometry*, **International Journal of Parasitology**, 2016 Jan; 46 (1): 31-9.
- 2015 Anusha S, Sinha A, Babu Rajeev CP, Chu TT, Mathai J, Ximei H, Fuchs JE, Shivananju N, Bender A, Preiser PR, Rangappa KS, Basappa, Chandramohanadas R\*. *Synthesis, characterization and in vitro evaluation of novel sulphonamide antimalarials*. **Organic and Biomolecular Chemistry**, 2015; 13 (43): 10681-90.
- 2015 Sinha A, Chu TT, Dao M and Chandramohanadas R\*. *Single-cell evaluation of red blood cell biomechanical properties upon chemically induced mild oxidative stress*, **Scientific Reports**, 2015 May 7; 5: 9768.
- 2014 Subramanian G, Sinha A, Chu TT and Chandramohanadas R\*. *Chemical Biology and Proteomics for Hunting Drug Targets for Human Malaria: An Update*. **MOJ Proteomics Bioinform** 1 (5), 00031.
- 2014 Chandramohanadas R, Basappa, Russell B, Liew K, Yau YH, Chong A, Liu M, Gunalan K, Raman R, Renia L, Nosten F, Shochat SG, Dao M, Sasisekharan R, Suresh S, Preiser P. *Small Molecule Targeting Malaria Merozoite Surface Protein-1 (MSP-1) Prevent Host Invasion by Divergent Plasmodia*, **Journal of Infectious Diseases**, (10): 1616-26.
- 2011 Chandramohanadas R<sup>^</sup>, Millholland MG<sup>^</sup>, Pizarro A, Wehr A, Shi H, Darling C, Lim CT, Greenbaum DC (<sup>^</sup>Equal contribution). *The Malaria Parasite Progressively Dismantles the Host Erythrocyte Cytoskeleton for Efficient Egress*, **Molecular & Cellular Proteomics**, 2011 Dec; 10(12): M111.010678.
- 2011 Chandramohanadas R, Park Y, Lui L, Li A, Quinn D, Liew K, Diez-Silva M, Sung Y, Dao M, Lim CT, Preiser PR, Suresh S. *Bio-physics of Malarial Parasite Exit From Infected Erythrocytes*, **PLoS ONE**, 2011; 6(6): e20869.
- 2010 Lucumi E, Darling C, Jo H, Napper AD, Chandramohanadas R, Fisher N, Shone AE, Jing H, Ward SA, Biagini GA, DeGrado WF, Diamond SL and Greenbaum DC. *Discovery of potent small molecule inhibitors of multi-drug resistant P. falciparum using a novel miniaturized highthroughput luciferase-based assay*, **Antimicrobial Agents & Chemotherapy**, 2010 Sep; 54(9): 3597-604. doi: 10.1128/AAC.00431-10.
- 2009 Chandramohanadas R, Davis PH, Beiting DP, Harbut MB, Darling C, Velmourougane G, Lee MY, Greer PA, Roos DS and Greenbaum DC. *Apicomplexan Parasites Co-opt Host Calpains to Facilitate Their Escape from Infected Host Cells*, **Science**, 2009 May 8; 324(5928): 794-7.
- 2008 Harbut MB, Velmourougane G, Reiss G, Chandramohanadas R and Greenbaum DC. *Development of bestatin-based activity-based probes for metallo-aminopeptidases*, **Bioorganic and Medicinal Chemistry Letters**, 2008 Nov 15; 18(22):5932-6. doi: 10.1016/j.bmcl.2008.09.021.

2003 Lemansky P, Gerecitano-Schmidek M, Das RC, Schmidt B and Hasilik A. *Targeting myeloperoxidase to azurophilic granules in HL-60 cells*, **Journal of Leukocyte Biology**, 2003 Oct; 74(4): 542-50.

### **Educational Publications**

**2019:** An investigation into the impact of flipped classroom with active learning on the Perception and performance of biology non-major students at the undergraduate level. Rai R, Zhu Y, Koh D, Khoo X, Krishnaswamy LN, Chandramohanadas R, Ong ES, and Pey KL. **Journal of College Science Teaching** (In Press)

**Special Mention: The global state of the art in engineering education 2018** (Author: Ruth Graham, MIT)

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