

RAJESH CHANDRAMOHANADAS, PhD
Scientist E-II
Division of Pathogen Biology
BRIC-Rajiv Gandhi Centre for Biotechnology
Thiruvananthapuram

Adjunct Associate Professor
Regional Centre for Biotechnology, New Delhi.



EDUCATION

PhD (Human Biology): **Philipps University**, Germany (2006)

MSc (Biochemistry): **University of Kerala**, India (2001)

BSc (Biochemistry): **University of Kerala**, India (1999)

EMPLOYMENT HISTORY

2021- **Scientist E-II**, BRIC-Rajiv Gandhi Centre for Biotechnology (**RGCB**)
2020-21 **Senior Lecturer & Principal Investigator**, National University of Singapore (**NUS**)
2013-20 **Assistant Professor**, Singapore University of Technology and Design (**SUTD**)
2009-12 **Visiting Scientist**, Massachusetts Institute of Technology (**MIT**)
2009- 2012 **Research Scientist**, Singapore-MIT Alliance for Research & Technology (**SMART**)
2009 **Associate Scientist**, ITC R & D Centre, Hyderabad-India (**ITC Ltd**)
2006- 2009 **Postdoctoral Fellow**, **University of Pennsylvania**, School of Medicine (**UPenn**)

APPOINTMENTS & LEADERSHIP ROLES

Current: **Faculty in Charge, RGCB Biosafety Level 3 Lab (BSL3)**
Faculty in Charge, RGCB Master's Program in Biotechnology
Current: **Editorial Board Member: BMC-Infectious Diseases**
April 2017- **Visiting Academician**, Changi General Hospital, Singapore
Jan 2016- **Joint Scientist**, KK Women's and Children's Hospital (**KKH**), Singapore
Jan 2013-17 **Investigator**, Singapore MIT Alliance for Research & Technology Centre (**SMART**)
Jan 2013- 21 **Executive Committee Member & Deputy Secretary**, Singapore Malaria Network

SELECTED PUBLICATIONS

1. Keerthy Reghunandanan, V.S. Lakshmi, Rose Raj, Kasi Viswanath, Christeen Davis, Rajesh Chandramohanadas*. *A Convolutional Neural Network- Based Deep Learning To Detect Reticulocytes From Human Peripheral Blood*. **Intelligence-Based Medicine** Volume 10, 2024, 100175
2. Malleret B, Abbas EH, Howland SW, Suwanarusk R, Ong, AS, Kosaisavee V, Chu TT., Sinha A, Gruszczyk J, Colin Y, Bertrand O, Lescar J, Maurer-Stroh S, Snounou G, Tham WH, Chandramohanadas R, Nosten F, Russell BM and Rénia L. *CD98 is a Plasmodium vivax receptor for human reticulocytes*. **Nature Microbiology** 2021 Aug; 6(8):991-999.3.
3. Banas A*, Banas K, Chu TT, Naidu R, Hutchinson P, Agrawal R, Lo M , Kansiz M , Chandramohanadas R* and Breese M. *Comparing infrared spectroscopic methods for the characterization of Plasmodium falciparum-infected human erythrocytes*. 4, **Communications Chemistry** Article number: 129 2021.
4. 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.
5. 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.
6. 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.
 7. 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.
 8. 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.
 9. Chandramohanadas R, Millholland MG, Pizzarro A, Wehr A, Shi H, Darling C, Lim CT, Greenbaum DC. *The Malaria Parasite Progressively Dismantles the Host Erythrocyte Cytoskeleton for Efficient Egress*, **Molecular & Cellular Proteomics**, 2011 Dec; 10(12): M111.010678.
 10. 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.

EXTRANURAL RESEARCH FUNDING

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|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024 (as PI): | Department of Biotechnology, India.
Functional Dissection of Host Protein Import by Plasmodium for non-metabolic purposes |
| 2023 (as PI): | Science and Engineering Research Board, India.
Deciphering the Role of Novel Reticulocyte surface Proteins in Plasmodium vivax Invasion. |
| 2020 (as Co-PI) | Ministry of Education, Tier 3 Team Grant, Singapore
Zoonosis: The Malaria Model |
| 2018 (as co-PI): | Marsden Grant, New Zealand.
Unravelling the molecular basis for vivax malaria's unhealthy attraction to human reticulocytes. |
| 2017 (as PI): | Ministry of Education, Tier 1 Grant, Singapore
Establishing SMIM-1 as potential drug/vaccine target against Human Malaria |
| 2015 (as PI): | Ministry of Education, Tier 1 Grant
Invasion and Adhesion as novel antimalarial scenarios and targeting thereof. |
| 2015 (as PI): | A*Star-DST JOINT GRANT
Chemical Phenotyping of Malaria Box molecules in Plasmodium falciparum and Toxoplasma gondii: Identifying and validating the targets of invasion and egress blockers for novel therapeutic design. |
| 2014 (as PI): | SUTD-MIT International Design Centre (Pilot Grant)
Design of Reconfigurable robotic systems for mosquito surveillance/targeting to control infectious diseases. |
| 2014 (as PI): | SUTD-ZJU Collaboration Grant
Designing Transgenic Fungi as Bio-pesticides. |
| 2013 (as Co-PI): | SUTD-MIT International Design Centre Research Grant
On-chip Flow Cytometer for Field- Deployable Clinical Diagnosis in the Developing World. |