

# VASANT MURALIDHARAN, PHD

CENTER FOR TROPICAL & EMERGING GLOBAL DISEASES

DEPARTMENT OF CELLULAR BIOLOGY

UNIVERSITY OF GEORGIA

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## PROFILE

Vasant grew up among scientists on the campus of the Bhabha Atomic Research Center in Mumbai, India. He studied chemistry and microbiology at the University of Mumbai, graduating at the top of his class. Vasant got a Masters in Biotechnology at the Indian Institute of Technology, Bombay, where he studied protein folding and dynamics. Vasant earned his PhD working on synthetic protein chemistry and biophysics with Tom Muir. For his postdoctoral training, he studied *Plasmodium* cell biology with Dan Goldberg, before joining the faculty of the Center for Tropical & Emerging Global Diseases at the University of Georgia. Vasant is an expert on *Plasmodium* cell biology and molecular genetics. The Muralidharan lab utilizes molecular genetics, cell biology, and biochemistry to study the biological mechanisms driving the disease. In addition, Vasant teaches graduate and undergraduate courses in cell biology and parasitology.

## CAREER HISTORY

### UNIVERSITY OF GEORGIA, Athens, GA

Associate Professor of Cellular Biology (Tenured), Center for Tropical & Emerging Global Diseases – 2020–Present

Associate Director, NIH T32 Training Program in Tropical & Emerging Global Diseases – 2020–Present

Adjunct Professor of Infectious Diseases, College of Veterinary Medicine – 2013–Present

Assistant Professor of Cellular Biology, Center for Tropical & Emerging Global Diseases – 2012–2020

### WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, St. Louis, MO

Research Instructor, Department of Medicine – 2012

HHMI Research Associate, Departments of Medicine and Molecular Microbiology – 2006–2012

## EDUCATION

**The Rockefeller University**, New York, NY — PhD, 2006

Graduate Student with *Dr. Tom W. Muir*

Thesis: Exploring the biophysical properties of domains within multi domain proteins.

**Indian Institute of Technology**, Bombay, Mumbai, India — MSc, 2000

Masters Thesis with *Dr. Anil K. Lala*

Thesis: Characterization of the molten globule state of Barstar using hydrophobic photolabeling

**V.E.S. College, University of Mumbai**, India — BSc, 1998

## AWARDS AND HONORS

Basil O'Connor Starter Scholar Research Award, March of Dimes (2015)

Pathway to Independence Award, K99/R00, NIH/NIAID (2012)

Albert Cass Travel Fellowship, The Rockefeller University (2003)

DBT Fellowship, Department of Biotechnology, Government of India (1998)

Prof. J.V. Bhat Scholarship, University of Mumbai (1998)

Sir Dinshaw Manockjee Petit Award, University of Mumbai (1998)

## PUBLICATIONS

1. Kudyba H.M., Cobb D.W., Vega-Rodriguez J., and **Muralidharan V.** (2021) Some conditions apply: Systems for studying *Plasmodium falciparum* protein function. **PLoS Pathogens**, 17: e1009442.
2. Cobb, D.W., Kudyba, H.M., Villegas, A., Hoopmann, M.R., Baptista, R., Bruton, B., Krakowiack, M., Moritz, R.L., and **Muralidharan, V.** (2021) A redox-active crosslinker reveals an essential and inhibitable oxidative folding network in the endoplasmic reticulum of malaria parasites. **PLoS Pathogens**, 17: e1009293
3. Zimbres, F.M., Valenciano, A.L., Merino, E.F., Florentin, A., Holderman, N.R., He, G., Gawarecka, K., Skorupinska-Tudek, K., Fernández-Murga, M.L., Swiezewska, E, Wang, X., **Muralidharan, V.**, and Cassera, M.B. (2020) Metabolomics profiling reveals new aspects of dolichol biosynthesis in *Plasmodium falciparum*. **Scientific Reports** 10: 13264
4. Florentin, A., Stephens, D.R., Brooks, C.F., Baptista, R.P., and **Muralidharan, V.** (2020) Plastid biogenesis in malaria parasites requires the interactions and catalytic activity of the Clp proteolytic system. **Proceedings of the National Academy of Sciences, U.S.A.** 117: 13719-13729
5. Florentin, A., Cobb, D.W., Kudyba, H.M., and **Muralidharan, V.** (2020) Directing traffic: Chaperone-mediated protein transport in malaria parasites. **Cellular Microbiology** 22: e13215
6. Fierro, M.A., Asady, B., Brooks, C.F., Cobb, D.W., Villegas, A., Moreno, S.N.J., and **Muralidharan, V.** (2020) An ER CREC family protein regulates the egress proteolytic cascade in malaria parasites. **mBio** 11: e03078-19
7. Kudyba, H.M., Cobb, D.W., Fierro, M.A., Florentin, A., Ljolje, D., Singh, B., Lucchi, N.W., and **Muralidharan V.** (2019) The ER chaperone PfGRP170 is essential for asexual development and is linked to stress response in malaria parasites. **Cellular Microbiology** 21: e13042.

8. Kudyba, H.M., Louzada, J., Ljolje, D., Kudyba, K.A., **Muralidharan, V.**, Oliveira-Ferreira, J., and Lucchi, N.W. (2019) Field evaluation of malachite green loop-mediated isothermal amplification as a malaria parasite detection tool in a health post in Roraima state, Brazil. **Malaria Journal** 18: 98.
9. Govindasamy, K., Khan, R., Snyder, M., Lou, H., Du, P., Kudyba, H.M., **Muralidharan, V.**, Turk, B., and Bhanot, R. (2018) *Plasmodium falciparum* cGMP-dependent protein kinase interacts with a subunit of the parasite proteasome. **Infection and Immunity** 87: e00523-18.
10. Kudyba, H.M.\*, Cobb, D.W.\*, Florentin, A., Krakowiak, M. and **Muralidharan V.** (2018) CRISPR/Cas9 gene editing to make conditional mutants of the human malaria parasite *Plasmodium falciparum* (\* – equal contributions). **Journal of Visualized Experiments** 139: e51141
11. Florentin, A., Cobb, D.W., Fishburn, J.D., Cipriano, M.J., Kim, P.S., Fierro, M.A., Striepen, B., and **Muralidharan, V.** (2017) PfClpC is an essential Clp chaperone required for plastid integrity and Clp protease stability in *Plasmodium falciparum*. **Cell Reports** 21: 1746-56
12. Cobb, D.W.\*, Florentin, A.\*, Fierro, M.A., Krakowiak, M., Moore, J.M., and **Muralidharan, V.** (2017) The exported chaperone PfHsp70x is dispensable for *Plasmodium falciparum* intraerythrocytic lifecycle (\* – equal contributions). **mSphere** 2: e00363-17
13. Szajman S.H., Galaka T., Li Z-H., Li C., Howell N.M., Chao M.N., Striepen B., **Muralidharan V.**, Moreno S.N.J., and Rodriguez J.B. (2017) In vitro and in vivo activity of sulfur-containing linear bisphosphonates against apicomplexan parasites. **Antimicrobial Agents and Chemotherapy**, 61: e01590-16
14. **Muralidharan, V.**, and Striepen, B. (2015) Teaching old drugs new tricks to stop malaria invasion in its tracks. **BMC Biology** 13: 72
15. Flaherty B.R., Wang Y., Trope E.C., Ho T.G., **Muralidharan V.**, Kennedy E.J. and Peterson D.S. (2015) The stapled AKAP disruptor peptide STAD-2 displays antimalarial activity through a PKA-independent mechanism. **PLoS One**, 10(5): e0129239
16. Beck, J.R.\*, **Muralidharan, V.\***, Oksman, A., and Goldberg, D.E. (2014) PTEX component HSP101 mediates export of diverse malaria effectors into host erythrocytes (\* – equal contributions). **Nature** 511: 592-595
17. **Muralidharan, V.**, and Goldberg D.E. (2013) Asparagine repeats in *Plasmodium falciparum* proteins: Good for nothing? **PLoS Pathogens** 9: e1003488
18. **Muralidharan, V.**, Oksman, A., Pal, P., Lindquist, S., and Goldberg, D.E. (2012) *Plasmodium falciparum* heat shock protein 110 stabilizes the asparagine repeat-rich parasite proteome during malarial fevers. **Nature Communications** 3: 1310
19. Cho J.H., **Muralidharan V.**, Vila-Perello M., Raleigh D.P., Muir T.W. and Palmer III A.G. (2011) Tuning Protein Autoinhibition by Domain Destabilization. **Nature Structural and Molecular Biology**, 18, 550-555. [Highlighted in Faculty of 1000 as a Must Read]
20. **Muralidharan, V.**, Oksman, A., Iwamoto, M., Wandless, T.J., and Goldberg, D.E. (2011) Asparagine repeat function in a *Plasmodium falciparum* protein assessed via a regulatable fluorescent affinity tag. **Proceedings of the National Academy of Sciences, U.S.A.** 108: 4411-4416

21. Russo, I., Babbit, S.\*, **Muralidharan, V.\***, Butler, T., Oksman, A., and Goldberg, D.E. (2010) Plasmeprin V licenses Plasmodium proteins for export into the host erythrocyte (\* – equal contributions). **Nature** 463:632-636
22. **Muralidharan V.\***, Dutta K.\*, Cho J. H., Vila-Perello M., Raleigh D.P., Cowburn D. and Muir T. W. (2006). Solution Structure and Folding Characteristics of the C-terminal SH3 Domain of c-Crk-II (\* – equal contributions). **Biochemistry** 45, 8874-88
23. **Muralidharan V.** and Muir T.W. (2006). Protein Ligation: An Enabling Technology for the Biophysical Analysis of Proteins. **Nature Methods** 3, 429-438
24. **Muralidharan V.**, Cho J.H., Trester-Zedlitz M., Kowalik L., Chait B.T., Raleigh D.P., and Muir T.W. (2004). Domain-specific Incorporation of Noninvasive Optical Probes into Recombinant Proteins. **Journal of the American Chemical Society** 126, 14004-14012

## MENTORING

*Dr. Olufunbi D. (Lola) Fagbami*, PhD (Harvard University, Boston, MA) Postdoctoral Researcher, 08/2020-present. Funded by [NIH Diversity Supplement](#) (08/2020 – 08/2022).

*Dr. Watcharatip (Am) Dedkhad*, PhD (Chiang Mai University, Thailand), Postdoctoral Researcher, 06/2019-present.

*Alejandra Villegas Lopez*, Graduate Student (BS, Northeastern Illinois University, Chicago, IL), 01/2019-present. Funded by [T32 Fellowship](#) (Fall 2020 – Fall 2021), [HHMI Gilliam Fellowship](#) (Fall 2021-present).

*David Anaguano*, Graduate Student (MS, UMass, Amherst, MA), 01/2019-present. Funded by [T32 Fellowship supplement from UGA Office of Vice-President for Research](#) (Fall 2020).

*Grace Woods*, Graduate Student (BS, Western Carolina University, Cullowhee, NC), 01/2021-present.

*Tia Tran*, Undergraduate student, 01/2018-present. [CURO Fellowship](#) (2020-2021).

*Neha Vennapusa*, Undergraduate Student, 01/2021-present.

### Lab Alumni:

*Dr. Anat Florentin*, PhD (Weizmann Institute of Science, Israel), Postdoctoral Researcher, 03/2014-06/2020. Funded by [American Heart Association Postdoctoral Fellowship](#) (2018-2020). University of Georgia [Postdoctoral Research Award](#) (2018). **Current Position:** Assistant Professor (Tenure-track), Faculty of Medicine, The Hebrew University of Jerusalem, Israel.

*Dr. David Cobb*, Graduate Student, 01/2016-09/2020. Partially funded by [ARCS Foundation Global Health Impact Fellowship](#) (2017-2020). Funded by [T32](#)

fellowship (2019-2020). **Current Position:** Postdoctoral Fellow, Columbia University School of Medicine, Dr. Chi-Min (Mimi) Ho's Lab.

**Dr. Manuel Fierro**, Graduate Student, 01/2016-05/2020: Funded by T32 fellowship (2017-2019). **Current Position:** Postdoctoral Fellow, Iowa State University, College of Veterinary Medicine, Dr. Josh Beck's Lab.

**Dylon Stephens**, BS/MS Student, Spring 2016 – Spring 2020. CURO Fellowship from UGA (2017-2018). **Current Position:** Graduate Student, Dr. Jim Collins's Lab, Dept. of Pharmacology, UT Southwestern Medical School,.

**Dr. Heather Kudyba**, Graduate Student, 01/2014-05/2019. Stipend supplement from the ARCS Foundation (2015-2018) Funded by T32 fellowship (2015-2017) **Current Position:** Postdoctoral Fellow, NIH/NIAID, Dr. Joel Vega-Rodriguez, Earl Stadtman Investigator, NIH Distinguished Scholar, Chief, Molecular Parasitology and Entomology Unit.

**Undergraduate Alumni:** *Varad Gurude* (Spring 2021); *Morenike Isola* (Fall 2020-Fall 2021); *Arnav Goyal* (Spring 2018); *Arden Farr* (Spring 2018); *Meha Patel* (Spring 2017 – Spring 2018); *Baylee Bruton* (Spring 2017–Spring 2018; **co-authored paper**); *Kristen Bascombe* (Fall 2013–Spring 2014; LSAMP); *Angelica Forero* (Fall 2013–Spring 2014; LSAMP); *Nathan Howell* (Foundation Scholar, Fall 2013–Spring 2015; **co-authored paper**); *Brandon Sims* (Fall 2014–Spring 2015; LSAMP); *Lamiya Zaveri* (University of Virginia, Summer 2015); *Paul Kim* (Fall 2015– Fall 2016; **co-authored paper**)

#### Thesis Committees:

*Victoria Mendiola*, Dept. of Infectious Diseases (Fall 2021-present)

*Nicole Khamsa*, Dept. of Cellular Biology (Fall 2021-present)

*Wayne Cheng*, Dept. of Infectious Diseases (Fall 2021-present)

*Ben Phipps*, Dept. of Entomology (Fall 2020-present)

*Cassie Russell*, Dept. of Infectious Diseases (Fall 2020-present)

*Katie Moen*, Dept. of Cellular Biology (Fall 2020-present)

*Megna Tiwari*, Dept. of Biochemistry & Molecular Biology (Fall 2019-present)

*Justine Shiau*, Dept. of Infectious Diseases (Fall 2019-present)

*Dipna Venkatachalam*, Dept. of Cellular Biology (Fall 2017-Fall 2019)

*Alona Botnar*, Dept. of Infectious Diseases (Fall 2017- Present)

*Brittany Berger*, Dept. of Biochemistry & Molecular Biology (Fall 2017- Present)

*Joshua Butler*, Dept. of Biochemistry & Molecular Biology (Fall 2017- Spring 2021)

*Karla Marie Marquez-Nogueras*, Dept. of Microbiology (Spring 2016-Fall 2020)

*Jayesh Tandel*, Dept. of Cellular Biology (Fall 2015-Fall 2017)

*Justin Weidman*, Dept. of Cellular Biology (Fall 2015-Spring 2021)

*Nicholas Sutton*, Dept. of Cellular Biology (Fall 2015)

*Phil Yao*, CTEGD, UGA-GRU MD-PhD program (Spring 2015-Fall 2017)

*Christina Moore*, Dept. of Cellular Biology MS, (Spring 2015-Fall 2017)

*Robert Piel*, Dept. of Biochemistry & Molecular Biology (Fall 2014-Fall 2019)

Ciera McKnight, Dept. of Cellular Biology (Fall 2014-Fall 2015)  
Ciro Cordeiro, Dept. of Cellular Biology (Fall 2013-Fall 2019)  
Justin Fellows, Dept. of Cellular Biology (Spring 2013-Fall 2017)

#### External Thesis Committees:

Hala Mansour, Institute Pasteur de Lille, Univ. of Lille, France (Fall 2021-present)  
Thorey Jonsdottir, University of Melbourne, Australia. External Reader (Fall 2021)

### TEACHING

**Cell Biology** (CBIO 3400, 4 Credit Hours; Enrollment: 80-90; Spring 2015-2020, Fall 2021-present): Structure and function of cells; cell architecture and organization, cell cycle, membrane phenomena, organellogenesis, energy transduction and cellular control mechanisms.

**Medical Parasitology** (CBIO 4500/6500, 3 Credit Hours; Enrollment: 35-50; Fall 2016-2018): Parasites are responsible for classical tropical diseases and emerging opportunistic infections in the United States. We discuss the biology of parasites, their vectors and hosts, and the diseases they cause, emphasizing modern molecular concepts. The class also covers epidemiology, control, prevention, and treatment of important parasitic diseases.

**Biology of Parasitism** (CBIO 8500, 4 Credit Hours; Enrollment: 10-15; Spring 2017-present): Parasitism and host-parasite interactions from cell biological, immunological, biochemical and molecular biological perspectives. Major protozoan and helminth parasites of humans, and unique aspects of immunity to parasites and parasite cellular biochemistry and molecular genetics. The control of parasites via vaccine development and chemotherapy.

**Seminar in Cellular Biology** (CBIO 4990/8490, 1 Credit Hour; Fall and Spring 2020-present; Enrollment 20-30): Capstone course required of all Cellular Biology majors usually taken in the fourth year or after completion of core requirements of the major. Presentation and discussion of current research in specific topic areas of cellular biology.

### GRANT FUNDING

#### Current

##### 2021-2023

NIAID R21 AI153851 (PI: Muralidharan)

**Title:** Essential function of a putative glycosyltransferase in *P. falciparum*.

**Total direct costs:** \$275,000

##### 2020-2022

NIAID R01 AI130139-03S1 (PI: Muralidharan)

**Title:** Diversity Supplement for Elucidating the trafficking mechanisms of effector proteins to the Plasmodium infected red blood cell.

**Total direct costs:** \$170,020

##### 2018-2022

NIAID R01 AI130139 (PI: Muralidharan)

**Title:** Elucidating the trafficking mechanisms of effector proteins to the Plasmodium infected red blood cell.

Total direct costs: \$1,250,000

**Past**

2018-2021

NIAID R21 AI133322 (PI: Muralidharan; co-PI: Moreno)

Title: Regulation of calcium signaling in human malaria parasites.

Total direct costs: \$275,000

2016-2020

NIAID R21 AI128195 (PI: Muralidharan)

Title: Role of Clp proteins in the biogenesis of the malaria parasite plastid.

Total direct costs: \$275,000

2016-2018

CDC-UGA Collaborative Grant (co-PIs: Muralidharan, UGA, and Lucchi, CDC)

Title: Investigating the association of Kelch13 polymorphisms with artemisinin resistance.

Total direct costs: \$100,000

2016-2017

University of Georgia, Faculty Research Grant.

Title: Regulation of calcium homeostasis in malaria parasites.

Total direct costs: \$10,000

2015-2017

March of Dimes Basil O'Connor Award (PI: Muralidharan)

Title: Chaperoning the malaria parasite through the human host.

Total direct costs: \$150,000

2013-2015

NIH R00AI099156 (PI: Muralidharan)

Title: Role of chaperones in maintaining the asparagine repeat rich proteome of *P. falciparum*.

Total direct costs: \$498,000

2012

NIH K99AI099156 (PI: Muralidharan)

Title: Role of chaperones in maintaining the asparagine repeat rich proteome of *P. falciparum*

Total direct costs: \$90,000

**INVITED TALKS**

2021 BIPOC in Parasitology Seminar Series, Inaugural Seminar, Virtual Seminar Series

2020 Department of Microbiology and Immunology, Drexel University College of Medicine, Philadelphia, PA

MALARIA-20 Advances in Malaria meeting. Virtual symposium

20th Molecular Approaches to Malaria meeting. Lorne, Victoria, Australia.

**2019** Department of Biological Sciences, University of North Carolina, Charlotte, NC

Department of Molecular Microbiology, Washington University School of Medicine, St. Louis, MO

**2018** Faculty of Health, Deakin University School of Medicine, Geelong, VIC, Australia

Trainee Invited Speaker, Department of Biochemistry, UT Southwestern, Dallas, TX

Gordon Research Conferences, Biology of host-parasite interactions. Newport, RI.

Center for Global Health, University of South Florida, Tampa, FL

**2017** 103rd American Society for Microbiology, Southeastern branch annual meeting. St. Petersburg, FL.

Department of Biochemistry, Cellular and Molecular Biology, University of Tennessee, Knoxville, TN

**2016** University of Manchester, Manchester, UK  
Wellcome Trust Center for Molecular Parasitology, University of Glasgow, Scotland, UK

CRISPR Approaches for Apicomplexans meeting. Wellcome Genome Campus, Hinxton, United Kingdom.

Department of Biology, Division of Infectious Diseases, University of Virginia, Charlottesville, VA

## **SERVICE**

### **University of Georgia**

2021-2024: Franklin College of Arts and Sciences, University of Georgia, Academic Standards Committee

2021-2024: HHMI Gilliam Adviser Diversity and Inclusive Mentorship program

2021-2024: Franklin College of Arts and Sciences, University of Georgia, International Studies Committee

2021-22: Member, Department of Cellular Biology tenure-track faculty in Biology Education search committee.

2021-22: Chair, CTEGD and Department of Infectious Diseases (College of Veterinary Medicine) tenure-track faculty search committee.

2021- present: Department of Cellular Biology Advisory Committee.



2021: Organized the 1st Emerging Fellows in Tropical & Emerging Global Diseases Symposium. Two T32 postdoctoral fellows were recruited into CTEGD labs.

2020- present: Department of Cellular Biology Faculty Senate Representative, Franklin College of Arts and Sciences, University of Georgia.

2020- present: Associate Director, Training in Tropical & Emerging Global Diseases, NIH T32 grant.

2019- present: Department of Cellular Biology Seminar Coordinator.

2019- present: Cellular Biology Graduate Student Association Faculty Advisor.

2018- present: CTEGD 'Research in Progress' coordinator.

2018-2019: Member of the Executive committee for comprehensive review of CTEGD at the University of Georgia.

2017-18: Member of the CTEGD Search committee for a tenure-track Assistant Professor studying the Biology of Parasitism at the University of Georgia.

2015-16: Member of the 'Way Forward' Committee at CTEGD charged with selecting the future Director for the CTEGD

2015-16: Member of the CTEGD Search committee for a tenure-track Assistant Professor studying the Biology of Parasitism at the University of Georgia.

2015-16: Member of the CTEGD T32 Admissions CTEGD of Cellular Biology Search committee for a tenure-track Assistant Professor studying the Biology of Parasitism at the University of Georgia.

### **The Rockefeller University**

2004-2005: Member of joint Student-Faculty selection committee for Summer Undergraduate Research Fellowships at the Rockefeller University.

2003-2006: Founding editorial board member of Natural Selections, a community newsletter at the Rockefeller University (<http://selections.rockefeller.edu/wp-content/uploads/2012/07/ns-00-2003.pdf>).

2003-2006: Member of selection committee for Student and Postdoc Sponsored Seminar Series at the Rockefeller University

### **Professional Service and Memberships**

2021: Session Chair, 32nd Annual Molecular Parasitology Meeting (Oct. 5th to 9th).

2021-Present: The American Society for Cell Biology

2017-Present: American Society for Microbiology

2017-Present: American Society for Tropical Medicine & Hygiene

2016: Organizing Committee, 1st Young Investigators in Parasitology (YIPS) meeting (Sept. 16th to 18th)

2016: Session Chair, 27th Annual Molecular Parasitology Meeting (Sept. 18th to 22nd).

2013-Present: American Association for Advancement of Science

### PEER REVIEW

Ad-hoc reviewer Medical Research Council, UK Research and Innovation, United Kingdom; Agence Nationale De La Recherche (ANR), France; European Research Council; 'Eukaryotic Pathogens and Vectors', 'Clinical Trial Planning and Implementation' study sections NIAID/NIH.

Editor: Microbiology Spectrum, 2021-present (ASM Journal. 2-4 papers/year).

About 8–10 papers per year: Review Commons, Nature Microbiology, eLife, Cell Host & Microbe, Cell Reports, PLoS Biology, PLoS Pathogens, Nucleic Acids Research, mBio, mSphere, PLoS ONE, Eukaryotic Cell, Scientific Reports, Science Advances, Peer J, Journal of Eukaryotic Microbiology, Antimicrobial Agents & Chemotherapy, Parasite & Vectors, Journal of Visualized Experiments

### CONFERENCE PRESENTATIONS

Anaguano-Pillajo D., and Muralidharan V. Identifying proteins required for export of membrane proteins to the *Plasmodium* infected erythrocyte. **Short Talk**, XXXII Annual Molecular Parasitology Meeting (2021). Woods Hole, MA

Villegas-Lopez A., Kudyba H.M., and Muralidharan V. Breaking out: Egress of malaria parasites requires a putative glycosyltransferase. XXXII Annual Molecular Parasitology Meeting (2021). Woods Hole, MA

Dedkhad W., Fierro M.A., and Muralidharan V. The regulation of the proteolytic cascade in egress of *Plasmodium falciparum*. XXXII Annual Molecular Parasitology Meeting (2021). Woods Hole, MA

Cobb D.W., Kudyba H.M, Hoopmann M., Moritz R.L., Bruton B., Krakowiak M., and Muralidharan V. Combined genetic and chemical approaches uncover the essential ER network of the human malaria parasite. 20th Molecular Approaches to Malaria Meeting (2020). Lorne, Victoria, Australia

Cobb D.W., Kudyba H.M, Hoopmann M., Moritz R.L., Bruton B., Krakowiak M., and Muralidharan V. Combined genetic and chemical approaches uncover the essential ER network of the human malaria parasite. 20th Molecular Approaches to Malaria Meeting (2020). Lorne, Victoria, Australia

Cobb D.W., Kudyba H.M, Hoopmann M., Moritz R.L., Bruton B., Krakowiak M., and Muralidharan V. Combined genetic and chemical approaches uncover the essential ER network of the human malaria parasite. 7th Cellular Biology of Eukaryotic Parasites Meeting (2019). Clemson, SC

Villegas A., Fierro M. A., and Muralidharan V. An essential fringe-like protein the *Plasmodium falciparum* asexual life cycle. 7th Cellular Biology of Eukaryotic Parasites Meeting (2019). Clemson, SC

Florentin A., Stephens D., Brooks C.F., Anaguano D., and Muralidharan V. Plasmodium Clp protease system controls plastid biogenesis via degradation of specific substrates. 7th Cellular Biology of Eukaryotic Parasites Meeting (2019). Clemson, SC

Fierro M.A., Hortua-Triana M.A., Asady B., Brooks C.F., Li C., Moreno S.N.J., and Muralidharan V. An ER-resident calcium binding protein modulates egress of malaria parasites from human red blood cells. **Short Talk**, XXX Molecular Parasitology Meeting (2019). Woods Hole, MA

Cobb D.W., Kudyba H.M., Hoopmann M., Moritz R.L., Bruton B., Krakowiak M., and Muralidharan V. Combined genetic and chemical approaches uncover the essential ER network of the human malaria parasite. XXX Molecular Parasitology Meeting (2019). Woods Hole, MA

Florentin A., Stephens D., Brooks C.F., Anaguano D., and Muralidharan V. Plasmodium Clp protease system controls plastid biogenesis via degradation of specific substrates. XXX Molecular Parasitology Meeting (2019). Woods Hole, MA

Fierro M.A., Hortua-Triana M.A., Asady B., Brooks C.F., Li C., Moreno S.N.J., and Muralidharan V. An ER-resident calcium binding protein modulates egress of malaria parasites from human red blood cells. XXIX Molecular Parasitology Meeting (2018). Woods Hole, MA

Kudyba H. M., Cobb D.W., Fierro M.A., Florentin A., and Muralidharan V. The ER chaperone PfGRP170 is essential for asexual development and is linked to stress response in malaria parasites. XXIX Molecular Parasitology Meeting (2018). Woods Hole, MA

Cobb D.W., Kudyba H.M., and Muralidharan V. The ER chaperone, PfJ2, is essential for the asexual development of Plasmodium falciparum. XXIX Molecular Parasitology Meeting (2018). Woods Hole, MA

Cobb D.W., Florentin A., Fierro M.A., Krakowiak M., Moore J.M., and Muralidharan V. Investigating the role of PfHsp70x, the sole parasite exported Hsp70, in the display of antigens on the surface of the P. falciparum infected RBC. 66th Annual American Society for Tropical Medicine & Hygiene (2017). Baltimore, MD

Kudyba H.M., Cobb D.W., Rodriguez J.L., Ravishankar R., and Muralidharan V. PfGRP170 is an essential ER protein in the human malaria parasite, Plasmodium falciparum. 66th Annual American Society for Tropical Medicine & Hygiene (2017). Baltimore, MD

Cobb D.W., Florentin A., Fierro M.A., Krakowiak M., Moore J.M. and Muralidharan V. The exported chaperone, PfHsp70x, is dispensable for the intraerythrocytic life cycle of Plasmodium falciparum. XXVIII Molecular Parasitology Meeting (2017). Woods Hole, MA (**Best Poster Award**)

Florentin A., Cobb D.W., Fishburn J.D., Kim P.S., Fierro M.A. and Muralidharan V. Plasmodium chaperone, PfClpC, is essential for apicoplast function. **Full talk** at the XXVII Molecular Parasitology Meeting (2016). Woods Hole, MA

Florentin A., Fishburn J.D., and Muralidharan V. Analyzing the function of the apicoplast resident chaperone ClpC in malaria infected red blood cells. 4th

Annual Cell Biology of Eukaryotic Pathogens Symposium (2015). Clemson University, Clemson, SC

Florentin A. and Muralidharan V. Analyzing the function of exported proteins in malaria infected red blood cells. 3rd Annual Cell Biology of Eukaryotic Pathogens Symposium (2014). Clemson University, Clemson, SC

Kudyba H.M., Cobb D.W., Ravishankar R. and Muralidharan V. Plasmodium falciparum ER resident protein, PfGRP170, is required for asexual growth and gametocyte formation. XXVII Molecular Parasitology Meeting (2016). Woods Hole, MA

Kudyba H.M. and Muralidharan V. Plasmodium falciparum ER resident protein, PfGRP170, is required for asexual growth and gametocyte formation. 4th Annual Cell Biology of Eukaryotic Pathogens Symposium (2015). Clemson University, Clemson, SC

Kudyba H. M. and Muralidharan V. Plasmodium falciparum ER resident protein, PfGRP170, is required for asexual growth and gametocyte formation. XXVI Molecular Parasitology Meeting (2015). Woods Hole, MA

Florentin A., Fishburn J.D., and Muralidharan V. The apicoplast chaperone ClpC is essential for intra-erythrocytic growth of Plasmodium falciparum. XXVI Molecular Parasitology Meeting (2015). Woods Hole, MA

Kudyba H.M., Fishburn J.D., and Muralidharan V. Deciphering the Role of GRP170 in the Intraerythrocytic Development of Plasmodium falciparum. 3rd Annual Cell Biology of Eukaryotic Pathogens Symposium (2014). Clemson University, Clemson, SC