

Faculty Name:

Chi-Min Ho (Mimi)

Faculty Email:

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Lab:

Ho Lab

Project Title:

Cryo Electron Microscopy (CryoEM) of Malaria Parasites: Parasite Culture, Engineering, Biochemistry & Microscopy

Description:

"The Ho Lab, in the Department of Microbiology & Immunology at Columbia University, is seeking a talented and enthusiastic undergraduate researcher to join us in using cryo electron microscopy (cryoEM) and in situ cryo electron tomography (cryoET) to explore how membrane protein complexes mediate host-pathogen interactions in the malaria parasite *Plasmodium falciparum*. We use CRISPR-Cas9 to genetically modify malaria parasites, cryoEM to determine structures of native membrane protein complexes purified directly from malaria parasites and cryoET to directly visualize parasite-infected red blood cells. Learn more about our research and our team here: www.cmholab.org.

We are looking for an innovative, resourceful and adventurous student who enjoys learning new things, meeting new people, and being part of an open, collaborative team. The student will learn how to culture blood-stage malaria parasites, use CRISPR-Cas9 cloning to generate new malaria parasite lines, and image them using fluorescence and cryo electron microscopy. Undergraduate students interested in exploring research in our lab are welcome to send their resume, unofficial transcript, current class schedule, and a cover letter with a paragraph or two about themselves, their future career goals, and a brief description of what they hope to learn to Dr. Ho at ch3516@cumc.columbia.edu. We're excited to meet you!"

Location of Research:

On-Site

of hrs/week:

12

Department/Program:

Biomedical Engineering

Eligibility:

BS, Second Year, BS, Third Year, BS, Fourth Year, MS

To apply, please contact:

Mimi Ho, ch3516@cumc.columbia.edu