



FISIO EM FOCO – SEMINÁRIO – 11/03/2019

Hora: 12h30 – Local: Auditório 1, Centro Didático IBUSP

“Heme Trafficking in Eukaryotes:

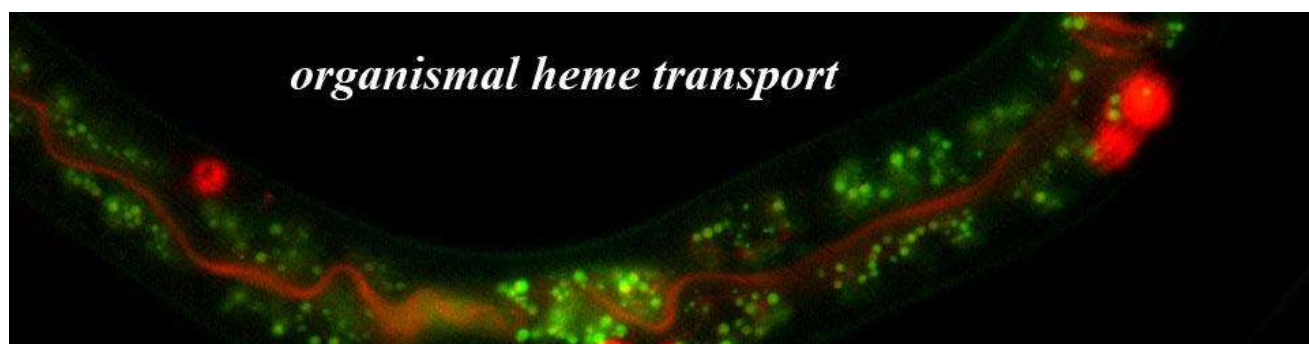
Lessons from Bloodless Worms”

Palestrante:

Prof Iqbal Hamza

University of Maryland

College Park, EUA



RESEARCH SUMMARY

Using the worm model, Dr. Hamza identified the first eukaryotic heme importer/transporter (HRG-1) which is conserved in zebrafish and humans [[Nature 2008](#)]. He uncovered how heme is exported from the intestine to other tissues [[Cell 2011](#); [Cell Metabolism 2014](#)], and more recently how organs communicate to each other to maintain organismal heme homeostasis by HRG-7 [[Nature Cell Biology 2017](#)]. These findings represent major discoveries in heme trafficking and establish a heuristic paradigm for heme transport in animals. His groundbreaking studies resulted not only in the identification of homologs for heme transporters in humans [[Cell Metabolism 2013](#); [PNAS 2016a](#); [PNAS 2016b](#)] but also in parasites such as hookworms, filarial worms and *Leishmania*, which rely on host heme for survival [[Infect Immun 2006](#), [PLoS NTD. 2009](#); [PLoS Pathogens 2012](#)].

(<https://hamza.umd.edu/>)