

Prof. Neta Regev-Rudzki, from the Department of Biomolecular Sciences, Weizmann Institute of Science, Israel, is leading a lab focused on the biology of *Plasmodium falciparum*– the malaria parasite the causing agent of the most devastating parasitic disease. Prof. Regev-Rudzki, born in Moshav Nes-Harim (near Jerusalem), earned her BSc in Chemistry (1998), and MSc in Biochemistry and Genetics (2002) from the Hebrew University of Jerusalem. She went on to complete her PhD in 2009 at the Hadassah Medical School, working on mitochondria in yeast model in the lab of Prof. Ophry Pines. She then conducted her postdoctoral training at the Walter and Eliza Hall Institute (WEHI) in Melbourne, Australia. And in 2015 she opened her lab at the Weizmann Institute of Science.

Her pioneering work centers on the communication mechanisms of the parasite through the secretion of extracellular vesicles (EVs) and their contents, which comprise an array of bioactive molecules, such as proteins, lipids, glycans, RNA, and DNA. This is a relatively new area of malaria research and only little is currently known about EV cargo delivery as well as functions, in particularly in mediating pathogen-host interaction. By delving into the cellular mechanisms that the parasites employ, she has unlocked the mystery of how they communicate with their two different host systems - the immune system and the red blood cells. These findings have the potential to open up a new therapeutic avenue in the fight against malaria.