

Abstract

Recent advancements in the field of lysosome biology have uncovered that in addition to its degradative function, lysosomes play an essential role in regulating several key biological processes such as plasma membrane repair, antigen presentation, cell migration/invasion and metabolic signalling. It has become increasingly evident that cellular distribution of lysosomes plays an essential role in regulating most of these unconventional functions. Researchers have identified several molecular players, which efficiently regulate lysosome positioning in the cell. Interestingly, small GTPases have emerged as one of the key players in the process. Our group has a keen interest in understanding the role of lysosomal small GTP binding protein Arl8b and its effectors in regulating lysosome positioning and cargo trafficking. As part of my master's thesis work, I am characterizing a novel interaction partner of Arl8b, which is a RUN domain containing protein and elucidating the significance of these protein-protein interactions on cargo transport towards lysosomes.