Our Research

Membrane trafficking pathways are mediated by a network of proteins and lipids that coordinately function to efficiently and rapidly transport proteins, lipids, and sugars to their final cellular destinations. The tight regulation of membrane transport events is not only fascinating but also fundamental for normal cell function and survival.

The major goal of our studies is to gain a novel insight into cellular mechanisms controlling membrane trafficking, and to extrapolate our knowledge to pathological situations involved in human diseases.

Current projects focus on:

i. Molecular mechanisms controlling lipid transport and their influence on membrane trafficking events and cellular lipid homeostasis (Read more)

ii. Mechanisms controlling the Golgi-glycosylation machinery and their implication in human diseases known as Congenital disorders of glycosylation (CDG) (Read more)

iii. Mechanisms regulating membrane traffic in professional secretory cells, such as the insulin-producing pancreatic β cells, and their implication in diabetes

We apply multidisciplinary experimental approaches including advanced biochemical and molecular biology techniques, advanced imaging techniques using confocal and electron microscopy, as well as basic lipidology.
Selected Publications

- Peretti, D., Dahan, N., Shimoni, E., Hirschberg, K., Lev, S. (2008). Coordinated lipid transfer between the endoplasmic reticulum and the Golgi complex requires the VAP proteins and

