



## Ezra AKSOY



Dr. AKSOY, key expert in PI3K signalling in innate immunity, has created a lab in the William Harvey Institute of London, UK.

She targets her work on the role phosphoinositol metabolism in mucosal immunity, inflammation and regeneration. The intestinal mucosa can be considered as a large immunologic organ, lined up with trillions of microbes and plays a major role in the development of oral tolerance and host-defence. Our studies are aimed to understand how phosphatidylinositol signalling by Nod-like receptors and TLRs control innate immunity and translate these signals during host-microbial interplay in the gastrointestinal tract. By employing mouse genetics, we investigate how a single or a set of genes can shape mucosal landscape to the signals derived from the environment (e.g. microbes, particles, toxins) and impact on gut inflammation (inflammatory bowel disease -IBD), oral tolerance and regeneration.

### Key publication:

Aksoy E, Taboubi S, Torres D, Delbauve S, Hachani A, Whitehead MA, Pearce WP, Berenjeno IM, Nock G, Filloux A, Beyaert R, Flamand V and Vanhaesebroeck B. *The p110delta isoform of the kinase PI(3)K controls the subcellular compartmentalization of TLR4 signaling and protects from endotoxic shock.* Nature immunology 2012;13:1045-1054. (co-corresponding author).