

Assessing the role of the gene, *pebbled*, in *D. melanogaster* ASP Invasive Behavior

Abstract

The *Drosophila* Air Sac Primordia (ASP) can be used to study invasive behavior as it mimics tumor behavior when it invades into the Wing Imaginal Disc (WID) during larval development. A protein expressed in the ASP was found to be coded by the gene *pebbled* (*peb*). This study was conducted to see whether *pebbled* influences the invasive behavior of the ASP. Using *Drosophila* genetics, the *pebbled* gene was knocked down and less-developed and less-invaded ASP's were seen as the result. The data presented provides information on the possible role of *pebbled* in tumor invasion. The downregulation of *pebbled* also lead to a decrease in filopodia (actin projections protruding from the ASP) supporting the claim that there is a direct positive correlation between quantity of filopodia and the invasiveness of the ASP.