Researchers at the University of South Florida have developed SEAM, a novel PKCδ II inhibitor that decreases cell survival of mature adipocytes and, consequently, obesity.

American society has become increasingly ‘obesogenic’ via influences of environments that promote increased food intake and lack of physical activity. An excessive amount of body fat or adipose tissue contributes to obesity. Adipose tissue is an important endocrine regulator of energy homeostasis and glucose metabolism. New adipocytes are required for storage of surplus energy in white adipose tissue (WAT). This excess adipose tissue mass is the basis of obesity and its associated diseases. However, to date, no effective therapeutic treatment exists.

Our researchers have designed SEAM, a PKCδ II inhibitor that has the potential to increase apoptosis in adipocytes. SEAM is a structural analog of the polyphenol resveratrol and selectively inhibits PKCδ II isoform. This invention has implications in combating obesity as PKCδ II is a protein kinase that promotes cell survivability of adipocytes. It also has potential as a valuable tool to determine the survival pathways affected by PKCδ II in all tissues and will serve as a great asset for its role in obesity management.

**ADVANTAGES:**
- Selectively inhibits PKCδ II isoform
- Increases apoptosis in adipocytes

![Graph Represents PCKδ II mRNA Normalized to β-actin and Represents Four Experiments Performed Separately](image)