

Treating an Atypical Protein Kinase C Enzyme Abnormality

Researchers at the University of South Florida have recently discovered the use of a small molecular weight inhibitors of protein kinase C (PKC)-zeta and protein kinase C-lambda/iota for the treatment of metabolic disorders, including glucose intolerance.

Diabetes is a world wide major cause of morbidity and mortality that is influenced by genetic factors, diet and exercise. Additional complications from diabetes include heart disease, stroke, kidney disease, eye problems, dental disease, nerve damage, and foot problems. Therefore, there is a need to discover a better method for the prevention and treatment of glucose intolerance and related disorders.

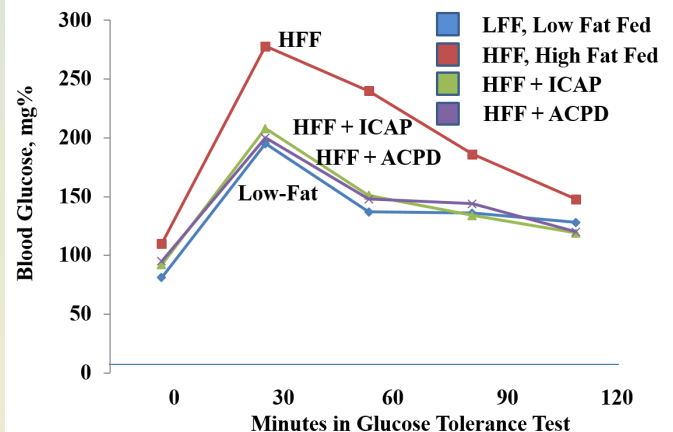
USF inventors have discovered 2-acetyl-1,3-cyclopentanedione (ACDP), which has the potential to prevent the development of, or reverse/diminish the pre-existing presence of these metabolic disorders. The technology is a novel, highly specific, potent, small molecular weight inhibitor of both atypical PKCs, PKC-zeta and PKC-lambda/iota. Effective treatment by a single agent for these abnormalities has the potential to solve what is perhaps the biggest health issue of the present era: the obesity/metabolic syndrome/type 2 diabetes pandemic that underlies many additional health complications.

This technology is directly applicable to the health care and pharmaceutical industries that are involved in the prevention and the treatment of metabolic disorders.

ADVANTAGES:

- Prevents development of the disease
- Diminishes the pre-existing presence of the disease

Novel Treatment for Metabolic Disorders Including Glucose Intolerance



ACPD Prevents Development of Glucose Intolerance in High-Fat-Fed (HFF) Mice