

Título: CHEMICAL LIBRARY OF PENTACYCLIC TRITERPENS FROM COLOMBIAN CECROPIA TELENITIDA: INHIBITORS OF 11- β HSD1 AS A KEY ENZYME IN DIABETES TYPE 2

DESCRIPCIÓN

Convocatoria No. 657-2014

Entidad: UNIVERSIDAD ICESI

Grupo de Investigación: COL0093872 - NATURA

Investigador Principal: Aram Joel Panay

Resumen Ejecutivo: The enzyme, 11 β -hydroxysteroid dehydrogenase type 1 (11 β HSD1) is becoming a new pharmacological target as more evidence supports the pivotal role of the enzyme in controlling cellular glucocorticoid effective concentration. Glucocorticoids, especially cortisol, are involved in multiple processes including glycemic homeostasis. Several studies with 11 β HSD1 inhibitors have shown remarkable reductions of glucose plasma levels in model animals, therefore, appearing as promising anti diabetes type 2 molecules. Pentacyclic triterpenes (PT) are of special interest not only for their reported inhibitory activity over 11 β HSD1, but also because they come from natural sources. Several plants produce PT molecules as secondary metabolites. Cecropia telenitida, a Colombian endemic plant, produces PT molecules and has been traditionally used as a medicinal plant with anti diabetic properties. In the current proposal we plan to create a chemical library of PT molecules derived from Cecropia telenitida, determine their structures, and evaluate their inhibitory activity over microsomal as well as cellular 11 β HSD1. The results from these studies will open the door for future research aimed at characterizing this molecules as potential new anti diabetic drugs