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Title: *"New Facets of Sterols and Steroids"*

Abstract:

We are interested in the biochemistry and chemistry of sterols and steroids. In particular:

-P450 8B1, sterol-12 α -hydroxylase, whose inhibition is a potential therapeutic target for treating obesity, has been expressed and purified. Biochemical characterization is underway.

-P450 7B1, oxysterol-7 α -hydroxylase, hydroxylates pregnenolone to form 7 α -hydroxypregnenolone, a neuroactive steroid that stimulates locomotor activity. We report the chemical synthesis of 7 α -hydroxypregnenolone, which will help us advance our knowledge of the biological activity of this important steroid hormone.

-P450 710A is the plant sterol desaturase. This enzyme is one of the few naturally occurring P450 enzymes known to form C-C double bonds from the net loss of a hydrogen molecule. We are currently elucidating the mechanism of the desaturation process.