

Abstract:

5 α -Androstan-17 β -ol-3-one condenses with 2-nitrobenzaldehyde in alkaline conditions to give the steroidal indoxyl 17 β -hydroxy-1-(3'-oxoindan-2'-yliden)-3-nor-1,2-secoandrostan-3-oic acid (I) which on refluxing with acetic anhydride affords the lactam 17 β -acetoxy-3'-aza-4a-homoandrost-1-eno-(3,2-a)-indan-3',4-dione (II). Reduction of I with sodium borohydride gives the indole 17 β -hydroxy-1-(indol-2'-yl)-3-nor-1, 2-secoandrostan-3-oic acid (III). The results of this synthesis suggest that 3-ketosteroids saturated in ring A react in a similar manner to 17-ketosteroids, with 2-nitrobenzaldehyde.