

**Steroid-17  $\alpha$ -hydroxy-17-carboxylic Acidとカルボジイミドとの反応. Steroid-17-spiro-5'-[2'-imino-4'-oxazolidinone]及び17-Spiro-5'-[2', 4'-oxazolidinedione]の合成**

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**Reaction of Steroid-17  $\alpha$ -hydroxy-17-carboxylic Acids with Carbodiimids. Synthesis of Steroid-17-spiro-5'-[2'-imino-4'-oxazolidinones] and 17-Spiro-5'-[2', 4'-oxazolidinediones]**

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Steroid-17  $\alpha$ -hydroxy-17-carboxylic acids were allowed to react with carbodiimides (DCCI, DPCI, DTCl, EDCI) to afford 17-spiro-5'-[2'-imino-4'-oxazolidinones](I), 17-spiro-5'-[2', 4'-oxazolidinediones](II) and *N*-acylureas (III), depending on the reaction conditions. The reaction in acetonitrile in the presence of CuCl<sub>2</sub> gave I, while that in *N,N*-dimethylformamide gave II. The reaction with DTCl under basic conditions afforded III along with II.

ステロイドの17  $\alpha$ -hydroxy-17-carboxylic acid化合物を種々のcarbodiimide類(DCCI, DPCI, DTCl, EDCI)と反応させたところ、反応条件により17-spiro-5'-[2'-imino-4'-oxazolidinone]体(I)、17-spiro-5'-[2', 4'-oxazolidinedione]体(II)、*N*-acylurea体(III)等が生成した。アセトニトリル中CuCl<sub>2</sub>の存在下で反応させるとIが生成するが、DMF中ではIIが生成した。塩基の存在下DTClとの反応はIIとともにIIIが生成した。