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We have established that diacylation, which is unusual for partially hydrogenated sixmembered nitrogen-containing alkylhetarenes and leads to the formation of the previously unknown 1-acyl-2-phenyl-4-acylmethylene-6-methyl-1,2,3,4-tetrahydropyrimidines (IIIa, b), occurs when 2-phenyl-4,6-dimethyl-1,2-dihydropyrimidine (I) is treated with acetic acid or benzoyl chloride.



Structure III was assigned to the diacylation products on the basis of data from the IR and PMR spectra.

EXPERIMENTAL

<u>1-Acety1-2-pheny1-4-acety1methy1ene-6-methy1-1,2,3,4-tetrahydropyrimidine (IIIa).</u> This compound, with mp 137-138°C (from ethy1 acetate), was obtained in 91% yield by refluxing di-hydropyrimidine I with a fivefold excess of acetic anhydride. IR spectrum (CHCl₃): 1680 and 1685 (C=0); 3500 cm⁻¹ (NH). PMR spectrum (CCl₄): 2.26 (3H, s, CH₃); 2.35 (6H, s, C- and N-COCH₃); 4.55, 4.65, and 5.10 (each 1H, s, 2-, 5-, and α -H); 7.15 (5H, s, C₆H₅); 7.50 ppm (1H, s, NH).

<u>1-Benzoyl-2-phenyl-4-benzoylmethylene-6-methyl-1,2,3,4-tetrahydropyrimidine (IIIb)</u>. This compound, with mp 190-191°C (from carbon tetrachloride), was obtained in 61% yield by treatment of I with a threefold excess of benzoyl chloride in pyridine at 20-25°C. IR spectrum (CHCl₃): 1662 and 1680 (C=0); 3400 cm⁻¹ (NH). PMR spectrum (CCl₄): 2.03 (3H, s, CH₃); 4.15, 4.38, and 5.30 (each 1H, s, 2-, 5-, and α -H); 7.20-7.45 ppm (16H, m, aromatic and NH protons).

The results of elementary analysis of IIIa, b were in agreement with the calculated values.

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