The pseudo-first order rate constant for the esterification of hexanoic acid (1) and five different $N,N$-dialkylamino alcohols (2) was determined in comparison to 1-hexanol ($k = 0.67 \cdot 10^{-5} \text{s}^{-1}$). The values range from $0.60 \cdot 10^{-5} \text{s}^{-1}$ to $9.3 \cdot 10^{-5} \text{s}^{-1}$. The data suggest a differing reactivity for structurally related compounds, which is directly correlated to the ability of the corresponding amino alcohol to activate the carboxylic acid by hydrogen bonding. A seven-membered transition state $C^\#$ is postulated for reactions of 2-amino alcohols. The fastest reaction was observed for $\text{trans-2-}(N,N\text{-dimethylamino})\text{cyclohexanol} (2e)$, in which the amino and the hydroxyl groups are in an almost perfect synperiplanar 1,2-position. Attempts to further enhance the rate of the esterification by the addition of potential catalysts failed. Only Cu(OTf)$_2$ (2.5 mol-%) allowed for a moderate rate increase from $7.5 \cdot 10^{-5} \text{s}^{-1}$ (uncatalyzed) to $14.8 \cdot 10^{-5} \text{s}^{-1}$ (catalyzed) in the esterification of hexanoic acid (1) with $2-(N,N\text{-dimethylamino})\text{ethanol} (2a)$.

Key words: Acylation, Amino Alcohols, Hydrogen Bonds, Kinetics, Transition States