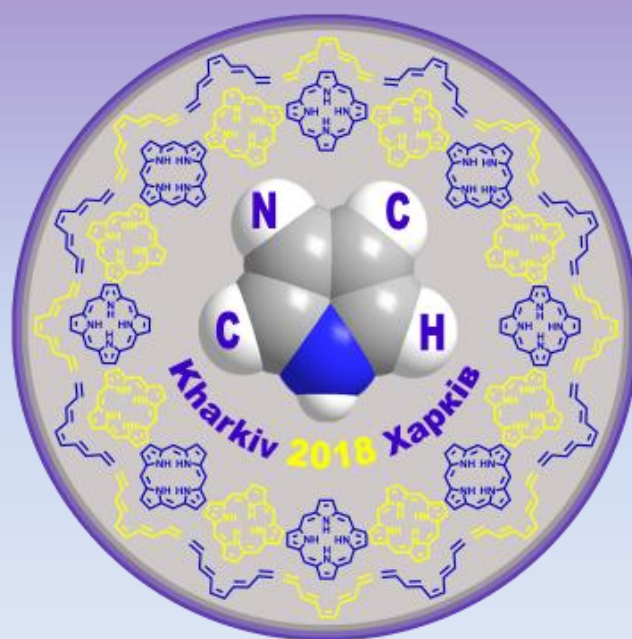


**8<sup>th</sup> International Conference**

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in memoriam of Prof. Valeriy Orlov**



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## CHAIN-CHAIN TAUTOMERISM OF $\omega$ -AMINOALCOHOL AMINOMETHYL DERIVATIVES

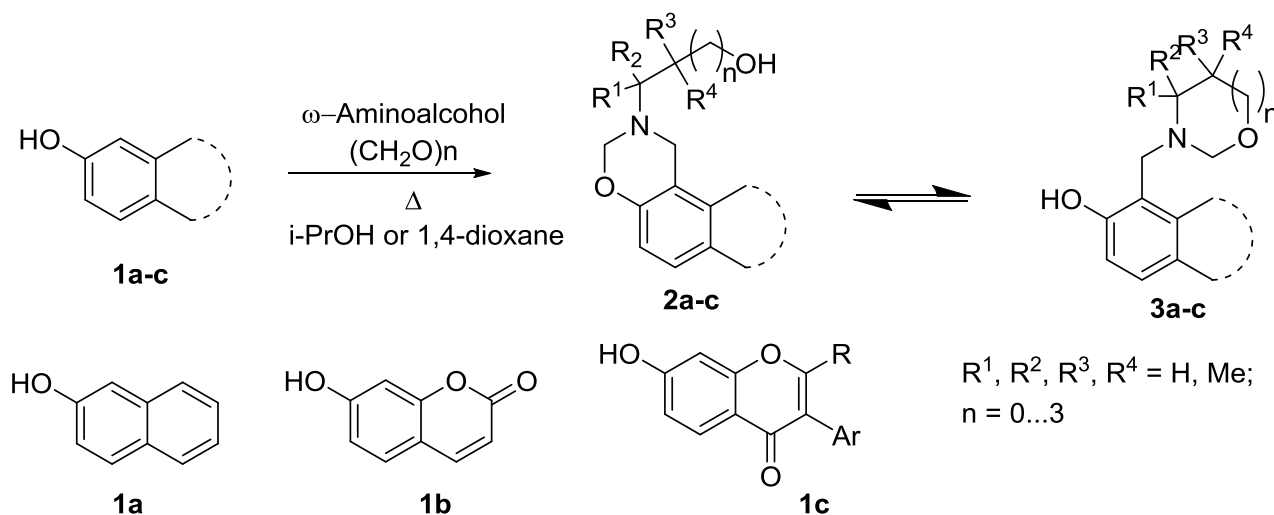
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The aminomethylation reaction of 2-naphthol (**1a**), umbelliferon (**1b**), and 7-hydroxyisoflavones (**2c**) using  $\omega$ -aminoalcohols and paraformaldehyde was studied. The products of reaction **2a-c** and **3a-c** exist as tautomeric mixtures which was confirmed by 2D NOESY spectra. The ratio of tautomers depends on carbon chain length of  $\omega$ -aminoalcohol, solvent, and pH. Thus, the major form of 2-aminoethanol derivatives ( $n=0$ ) is 1,3-benzoxazine **2a-c**. However, low-polar solvents shift equilibrium toward 1,3-oxazoline form **3a-c**. Derivatives of 3-aminopropanol ( $n=1$ ) are preferably exist as compounds **3a-c** in all solvents. The mixture of tautomers also was indicated for 4-aminobutanol derivatives ( $n=2$ ), but 5-aminopentanol derivatives ( $n=3$ ) exist only in 1,3-benzoxazine form **2a-c**.



Introducing of the methyl substituent(s) in alkyl chain of 2-aminoethanol derivatives has not led to significant difference in tautomer ratio in comparing with influence of carbon chain length in aminoalcohols.

The presence of electronwithdrawing 2-CF<sub>3</sub> in isoflavones **3c** predominantly led to the formation of Mannich base which contain secondary amine fragment.