MODIFICATION OF THE AMINO ACID DERIVATIVES OF COUMARINS BY 10-HYDROXYDECAHYDROISOQUINOLINE

As known, one of the limitations of wide medical application of bioactive peptides is their susceptibility to cleavage by enzymes of the organism. The simplest method to overcome this drawback is the N- or C-block polypeptides. To protect the C-terminal group of synthetic peptides often use the transformation of carboxyl group to amide group in compound. Weighing the above, blocking the free carboxyl group, we were using 10-hydroxydecahydroisoquinoline.

It should be noted that heterocyclic isoquinoline system and its hydrogenated derivatives widespread very widely in nature. It is part of many biologically active substances such as alkaloids isoquinoline series. The decahydroisoquinoline system meets in the structures of inhibitors of HIV protease. In these compounds decahydroisoquinoline part imitates proline residue contained in the site R'1 natural substrates of HIV protease. Derivatives of 10-hydroxydecahydroisoquinoline was used for the synthesis of Laemoranum, active analgesic that acts stronger than morphine. It should also be emphasized that the derivatives of decahydroisoquinoline are antagonists of receptors so-called excitatory amino acids. They are used to prevent and treat a variety of neurological diseases. It can be assumed that the inclusion of decahydroisoquinoline part to the structure of the peptide lead to the creation of new compounds with interesting biological properties.

In this study as starting compounds used derivatives of 3,4,8-substituted coumarins modified by residues of glycine and β-alanine. The reaction of blocking the free carboxyl group of amino acids coumarins was carried out using the method of activated esters by the presence DCC as a coupling agent.

Key words: coumarins, amino acids, method of activated esters.