

## Abstract

The integrins are family of  $\alpha,\beta$  heterodimeric receptors with high importance in many cell processes. They are expressed by all multicellular animals. Mainly  $\alpha(v)\beta(3)$  subset plays important role in cells adhesion with surroundings. Adhesion decrease by occupation of these receptors is used as restriction for tumor metastasis or for early tumor imaging.

Description of structure and three-dimensional orientation of binding place of this subset were set RGD (Arg-Gly-Asp) peptide as high affinite ligands. According to computing accounted models of interaction between RGD peptide and binding place were also nonpeptide ligands prepared.

In this publication we tried to prepare potentially usable molecules for tumor imaging on PET scanners. For the base we chose already known molecules with high affinity to  $\alpha(v)\beta(3)$  integrins and with iodine substitution we got possibility for radioactive labelling. Unfortunately, this incorporation of iodine into the molecule decreased  $IC_{50}$  to value preclusive practical using.