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Mezinárodní spolupráce v oblasti „*in vivo*“ zobrazovacích technik
Laboratoř Metalomiky a Nanotechnologií

Vás zve na seminář:

Synthesis of peptide for cell penetration and drug delivery

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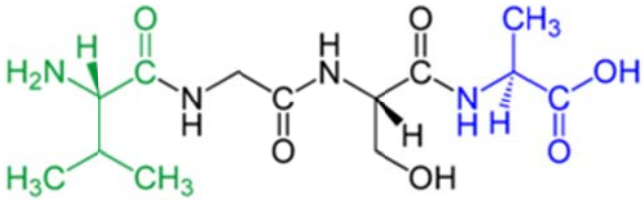
Abstrakt

During the last decade, the potential of peptides for drug delivery into cells has been highlighted by the discovery of several cell-penetrating peptides (CPPs) such as Arg-9. CPPs are very efficient in delivering various molecules into cells. CPPs have the special property of carrying with them cargoes of a wide range of molecular size such as proteins, oligonucleotides, and even 200 nm liposomes Cell penetrating peptides (CPPs) are short sequen ces of amino acids (<30) capable of entering most mammalian cells. The efficient passage of drugs through the plasma membrane remains a major hurdle for drug delivery. Cell penetrating peptides are required to carry some drugs or other important chemicals or proteins from outside into cell because the cell membrane is selectively permeable. The channel proteins of cell membranes first recognize the cell penetrating peptides and then they allow to get enter into the cells. Good cell uptake often requires the administration of high quantities of drugs in order to obtain the expected intracellular biological effect. Therefore, improving the translocation process across the plasma membrane will significantly reduce the quantity of drug to be administered, and the side effects on healthy tissues that are currently observed in most of the cases. One of the goals of this research will be to optimize the tissue and cell delivery of therapeutic molecules by means of peptides which combine both targeting and internalization advantages.



pátek 18. 04. 2014, od 14:00

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