



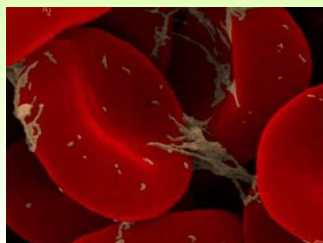
Magnetické nanočastice a terapia onkologických ochorení

RNDr. Monika Mesárošová

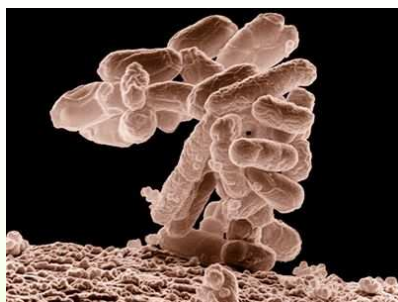
**Laboratórium mutagenézy a karcinogenézy
Ústav experimentálnej onkológie SAV**



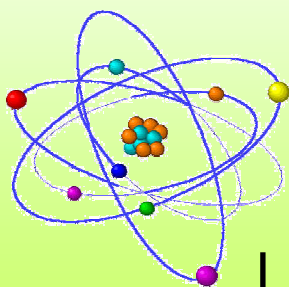
peľové zrná (20-200 μm)



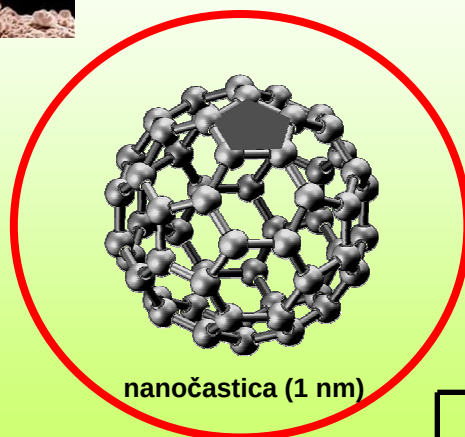
červená krvinka (7 μm)



baktérie (1 μm)



atóm (0,1 nm)



nanočastica (1 nm)



1 mm

100 μm

10 μm

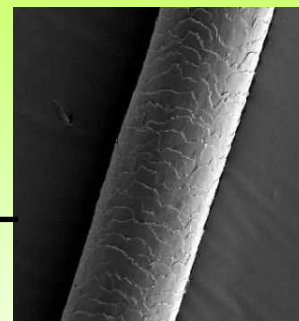
1 μm

100 nm

10 nm

1 nm

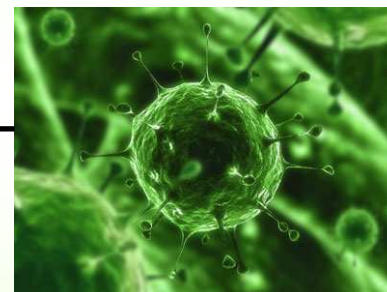
0,1 nm



vlas (60 μm)



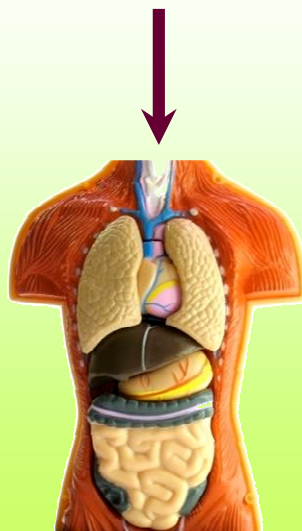
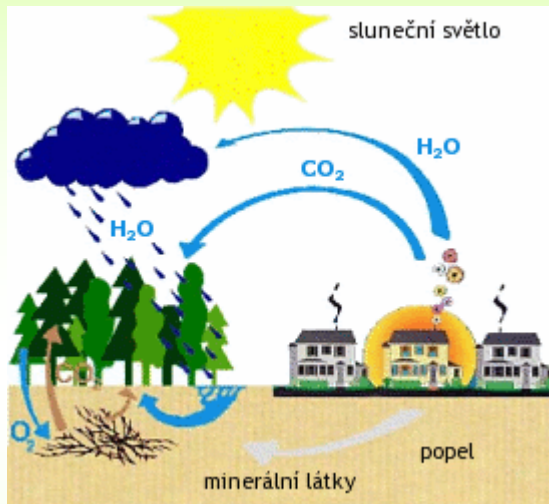
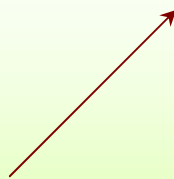
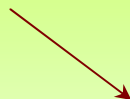
spermia (60 μm)

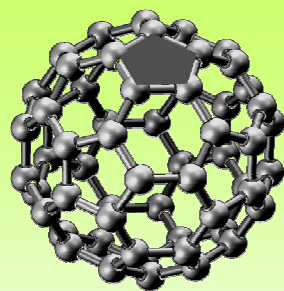


vírus (10-150 nm)

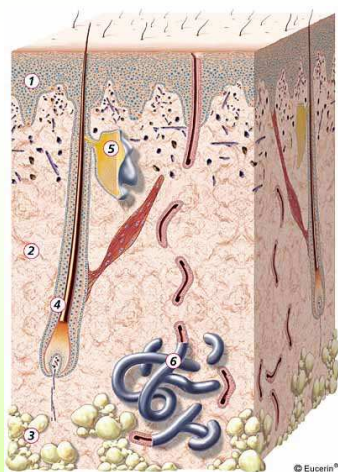
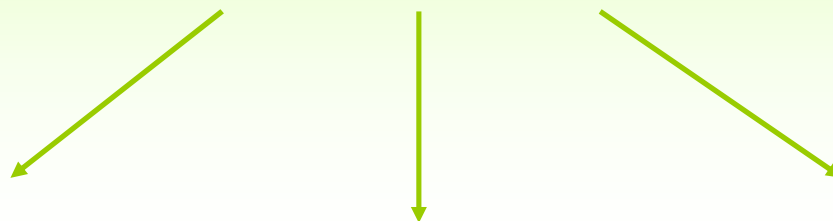


DNA (2 nm)

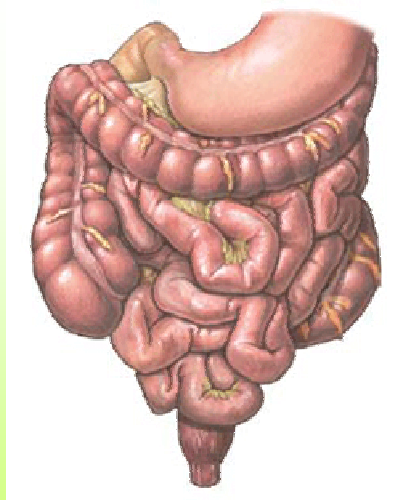




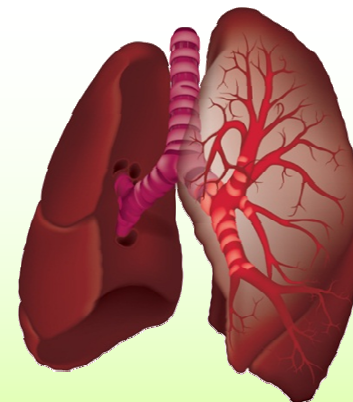
nanočastica



koža



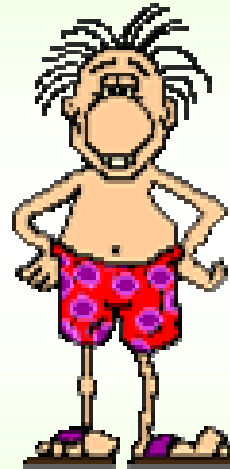
tráviaca sústava



pl'úca

Cielene vyrábané nanočastice

- mnohé odvetvia priemyslu
 - kozmetika
 - textil
 - chemický p.
 - farmácia
 - potravinárstvo
 - elektrotechnika

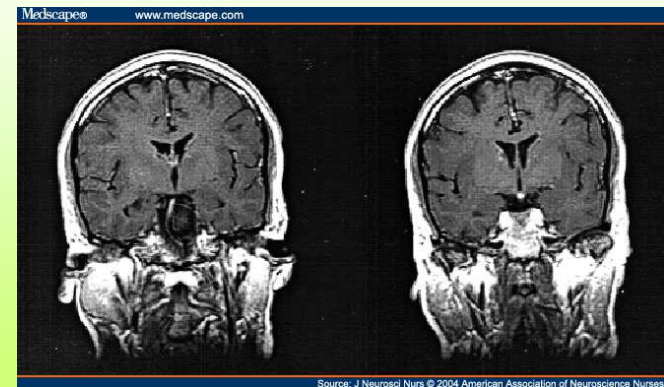
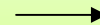


Cielene vyrábané nanočastice

Nanomedicína:

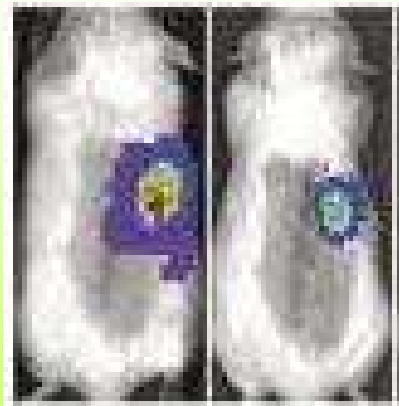
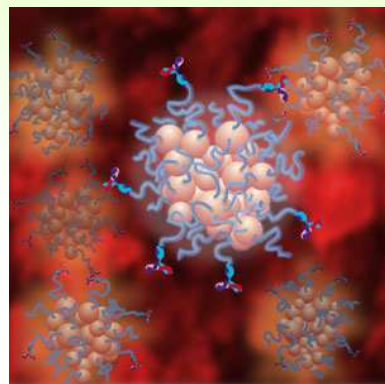
- zlepšenie diagnostiky a liečby onkologických ochorení (nádory kože, pľúc, prsníka, pečene, ...)
- magnetické nanočastice

magnetická rezonancia – kontrastné činidlá



➤ magnetické nanočástice

cielená magnetická terapia



Cieľ našej práce

- testovanie toxicity magnetických nanočastíc na rôznych typoch buniek
 - testovanie životaschopnosti buniek
 - testovanie schopnosti nanočastíc poškodzovať DNA
 - sledovanie bunkovej signalizácie

BEZPEČNOSŤ resp. RIZIKO ???



A photograph of three small, light-colored hamsters on a dark background. One hamster is perched on top of a large, smooth, yellow egg. Two other hamsters are positioned on either side of the egg, appearing to support it. A thin, glowing orange hula hoop is suspended in the air around the hamster on top. The text "ĎAKUJEM ZA POZORNOST" is overlaid in the center of the image.

ĎAKUJEM ZA POZORNOST