

Novi materiali in njihova varnost

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Razvoj novih materialov in funkcionaliziranih površin odpira nove možnosti. Nanosi nanomaterialov na izpostavljenih površinah danes v laboratorijih nor. potrjujejo povsem nov a hkrati zelo učinkovit način obrambe pred nevarnimi bakterijami. Toda za varno uporabo to ni dovolj. Prej ali slej ti materiali pridejo v stik z ljudmi. Preizkusiti jih je treba torej tudi v tem, kako interagirajo z našim telesom, z rastlinami in živalmi. Hkrati pa poskrbeti za kar najboljšo možno lokalizacijo njihove uporabe. Naj služijo tam, kjer jih zares potrebujemo! Po drugi strani nove funkcionalizirane površine odpirajo razvoj novih medicinskih materialov, implantov in scaffoldov, a tudi tu je njihova varnost še precej nenapovedljiva. V svetu, kjer novi materiali in različne funkcionalizirane površine rastejo kakor gobe po dežju, bi torej morala biti skrb, da ti materiali ne predstavljajo skritih nevarnosti za zdravje ljudi in njihovo življenjsko okolje, največja prioriteta. Pa je res? Številni projekti po svetu dokazujejo, da širši raziskovalni skupnosti ni vseeno, kaj izroči trgu na njegovo milost in nemilost. Tudi v okviru Centra odličnosti NAMASTE smo združili različne profile s področij materialov, naravoslovja, biotehnologije ter medicine in veterine, da bi vzpodbudili razvoj človeku varnih bioaktivnih, biokompatibilnih in bioinertnih materialov in predvsem pokazati na njihovo dolgoročno varnost in biokompatibilnost.

New Materials and Their Safety

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Development of novel materials and functionalized surfaces provides new opportunities. Nanomaterial coatings tested in the laboratories already proved a new concept of protection against patogeneous bacteria. But that is far from guaranteeing safe usage as these materials sooner or later make close contacts with human body. Therefore they have to be tested for interactions with our body tissues and cells, plants and animals. At the same time, the application should try to localize these materials as much as possible. Let's allow these materials to serve us where we really need them! On the other side, new functionalized surfaces bring development of new medical devices, implants and scaffolds however their safety is still unpredicatble. In the world of novel materials and developing technologies preventing hidden threats to our health and environment should be our main priority. But is it truly? Numerous projects around the world proved that the research community is really concerned what comes to a free market. Within NAMASTE Center of Excellence we joined the research profiles of material sciences, natural sciences, biotechnology, medicine and veterinary sciences to encourage development of new human-healthy bioactive, biocompatible and bioinert materials and show their longterm safety and biocompatibility.