



Cancer nanomedicine: focus on recent developments and self-assembled peptide nanocarriers

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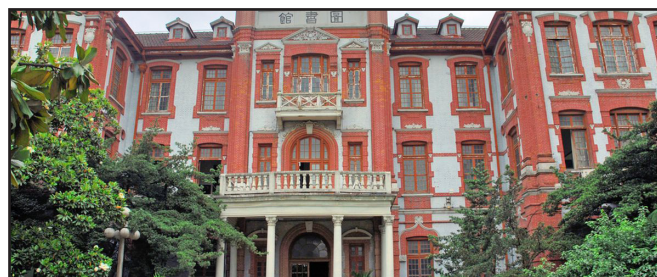
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Abstract:

The applications of nanoparticulate drug delivery have received abundant interest in the field of cancer diagnosis and treatment. By virtue of their unique features and design, nanomedicines have made remarkable progress in eliminating dreadful tumors. Research in cancer nanomedicine has spanned multitudes of drug delivery systems that possess high tumor targeting ability, sensitivity towards tumor microenvironments and improved efficacy. Various nanocarriers have been developed and approved for anti-tumor drug targeting. These nanocarriers, i.e., liposomes, micelles, nanotubes, dendrimers and peptides, offer a wide range of advantages, such as high selectivity, multi-functionality, specificity, biocompatibility and precise control of drug release. Nanomedicines based on self-assembled peptide carrier systems have been developed in recent years for cancer targeting. Self-assembled peptides have tremendous properties of forming targeted drug delivery vehicles such as nanohydrogels with unique features and functionality. In this review article, we discuss some developments in cancer nanomedicine. We present a diverse range of nanotargeted drug-delivery systems.

Biography:

Faisal raza has completed his Ph.D. in Pharmaceutics and his expertise include targeted drug delivery, Nanomedicine, Biomemtic Nanotechnology.



Publication of speakers:

1. Carbon dots: Applications in bioimaging and theranostics; KO Boakye-Yiadom, S Kesse, Y Opoku-Damoah, MS Filli, M Aquib.
2. A review on recent advances in stabilizing peptides/proteins upon fabrication in hydrogels from biodegradable polymers; F Raza, H Zafar, Y Zhu, Y Ren, A Ullah, AU Khan, X He, H Han, M Aquib.
3. Paclitaxel-loaded pH responsive hydrogel based on self-assembled peptides for tumor targeting; F Raza, Y Zhu, L Chen, X You, J Zhang, A Khan, MW Khan, M Hasnat.
4. Drp1-associated mitochondrial dysfunction and mitochondrial autophagy: a novel mechanism in triptolide-induced hepatotoxicity; M Hasnat, Z Yuan, M Naveed, A Khan, F Raza, D Xu, A Ullah, L Sun.
5. Synergism of cisplatin-oleanolic acid co-loaded calcium carbonate nanoparticles on hepatocellular carcinoma cells for enhanced apoptosis and reduced hepatotoxicity; MW Khan, P Zhao, A Khan, F Raza, SM Raza, M Sarfraz, Y Chen, M Li.

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