



Conference Proceeding

Protein Biomimetic Diagnostic Probe

Weitao Yang, Bingbo Zhang

Medical School of Tongji University, Shanghai, 200092, China.

Corresponding author. E-mail: bingbozhang@tongji.edu.cn

Presented: 2018 Chinese Conference on Oncology. Shenyang, China, Aug. 17-19, 2018; **Published:** Oct. 18, 2018.**Citation:** Weitao Yang, Bingbo Zhang, Protein Biomimetic Diagnostic Probe. *Nano Biomed. Eng.*, 2018, Special Issue: 321.

Abstract

Molecular probes are an important part in the diagnosis and treatment of diseases. However, the non-specific adsorption of probes is seriously affecting the detection accuracy and sensitivity. We focus on addressing the above problems. By using protein-mediated biomimetic strategy, a series of scientific research, including surface engineering of nanoparticles with proteins, protein-mediated biomimetic synthesis and the related mechanism study have been carried out in a green chemistry fashion. It includes: (1) it is the first time that hydrophobic nanoparticles have been modified by BSA protein with its hydrophobic cavity exposed by the ultrasonic effect, greatly reducing nonspecific adsorption or "protein corona" of nanoprobe; (2) it discloses that some related amino acids have important roles in the biomimetic chemistry, and provides a green, simple and efficient route for integration of multi-functional moieties for cancer diagnosis and treatment.

Copyright© Weitao Yang, Bingbo Zhang. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.