Point of care diagnostic for infectious disease

Background

In recent years, nanomaterials of various shape, size, and composition have been prepared and characterized, such as gold nanoparticles, silver nanoparticles, quantum dots, mesoporous silica nanoparticles, carbon nanomaterials, and hybrid nanocomposites. Because of their unique physical and chemical properties, these nanoparticles are increasingly utilized in point-of-care testing (POCT) to increase analytical performance and simplify detection process. Nanoparticles are used as labels for signal generation, transduction and amplification or as carriers for immobilizing biorecognition elements. The current POCT technologies employed nanotechnology for the analysis of disease biomarkers, including small-molecule metabolites, enzymes, proteins, nucleic acids, cancer cells, and pathogens. POCT involves performing a diagnostic test outside a laboratory that produces a rapid, reliable result, aiding in identifying or managing chronic diseases and acute infections. Furthermore, POCT also used to optimize medication therapy and avoid adverse drug events.

Time Schedule

Time	Activities	Venue
08.00-08.30	Registration and opening	Meeting Room 3rd floor
08.31-10.00	**Session 1:** Introduction: Nanoparticles for biomedical application (POCT)	Pharmaceutical Chemistry Lab
10.01-10.20	Coffee Break	
10.21-12.00	**Session 2:** Synthesis and functionalization nanoparticles with protein (DNA/antibody etc).	Pharmaceutical Chemistry Lab
12.01-13.00	Lunch Break	
13.01-15.00	**Session 3:** Characterization nanoparticles and application modified nanoparticle for detection pathogen	Research Lab
15.01-15.30	Coffee break	
15.31-16.30	**Session 4:** Result evaluation and discussion	Pharmaceutical Chemistry Lab
16.46-17.00	Closing	Pharmaceutical Chemistry Lab

Speaker and Committee:

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