

Talk Abstract

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Generic Pre-analytical Workflows: Challenges and Solutions

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Molecular *in vitro* diagnostics and biomedical research have allowed great progress in medicine. Further progress is expected by new technologies analysing cellular biomolecule profiles such as nucleic acids, proteins, and metabolites. New biomarkers based on these biomolecule classes including disease-specific biosignatures will be key value drivers for future personalised medicine and improved health care. Studies have demonstrated that profiles of these molecules can change drastically during sample collection, processing, transport, storage, archiving and biomolecule isolation thus making diagnostics or research unreliable or even impossible. High quality clinical samples with preserved bioanalyte profiles are therefore critical to diagnostics, research, and biobanking. Access to such high quality samples is one of the major hurdles for the identification and validation of novel biomarkers. International initiatives for biospecimen research, for developing new pre-analytical technologies and tools, and for standardising pre-analytical workflows by new international evidence-based guidelines have therefore been recently started. The four-year large-scale integrating research project SPIDIA within the European Union FP7 programme is one of the major contributors to these efforts. New pre-analytical workflow solutions for tissues, blood and other sample types coming from SPIDIA as well as from other initiatives will be presented.