

# 2<sup>nd</sup> International Conference on Genomics & Pharmacogenomics

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## Analysis of free circulating DNA in peripheral blood

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Free circulating DNA (fcDNA) in peripheral blood is a subject of increasing interest in the circles of medical diagnostic and cancer research. We decided to evaluate methods used for extraction and analysis of the fcDNA. The blood from patients was collected into three types of tubes: ACT, EDTA and Streck cell free DNA BCT. The cell free BCT tubes stabilize blood cells and do not allow for the uncontrolled release DNA or RNA to the plasma during the handling and preparation procedure. Extraction of DNA was performed using both column (Qiagen) and magnetic bead (SNOVA and OMEGA) protocols according to the manual provided by the manufacturer. The undergoing result of comparison methods for DNA purification from plasma will be presented. Extracted DNA was subjected for sequencing on Illumina Sequencing platform. We used three major methods for DNA sequence analysis - Whole Genome Sequencing, TruSeq DNA Capture and Amplicon protocols. We focused on Molecular Tag Amplicon sequencing strategy since this technology is most clinically relevant at this time. Therefore, data for a SNP targets amplified on PCR or Fluidigm Access Array platform used for cancer research will be presented during the meeting.

### Biography

Piotr Mieczkowski has completed his PhD at the Institute of Biochemistry and Biophysics Polish Academy of Sciences and Postdoctoral studies at the University of North Carolina at Chapel Hill and Duke University. He is the Director of the High Throughput Sequencing Facility at UNC. He has published more than 56 papers in reputed journals. His work is focused around new applications for next generation sequencing technology, genome stability and mutagenesis.

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