**Oncology Prevention, Diagnosis and Treatment: Harnessing the Efficiency of MassArray System**

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**Abstract**

The databases from World Health Organisation and American Cancer Society report on frequency, mortality and survival expectancy of the leading 15 types of cancers world wide that affect humans, with a total number of 18 million diagnosed new cases in 2018. Cancer is a major cause of morbidity and death in the world. Early detection and treatment are required to combat and reduce disease occurrence. The prevention, diagnosis and treatment of cancer is increasingly focusing on the genomic (genetic & epigenetic) of individuals and requiring precision. Detection of clinically relevant biomarkers requires accuracy, affordability and quick detection. The AgenaBioscience MassArray system is a valuable system that utilises low DNA input. The highly-multiplexed MassArray can detect clinically relevant biomarkers in 1-2 days, with 2% QNS rate. The assays for oncology on the MassArray system include iPLEX HS for Tumour profiling and enables the study of somatic variants from tissue biopsies, with limit of detection ≥1%, iPLEX® Pro for detecting known and unknown Fusion partners, enables the study of chromosomal and non-chromosomal gene rearrangements; and UltraSEEK® enables the study of somatic variants for liquid biopsies, with limit of detection ≥0.1%. The MassArray system has application for Methylation detection, Hereditary genetic, Pharmacogenetics (PGx), sample integrity and infectious disease.

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**Biography:**

Bene is a graduate of River State University of Science & Technology in Applied Biology (Medical Microbiology option); with an MRes degree at University of East London, United Kingdom.

She had her PhD study & worked at the Department of Natural Sciences, Middlesex University, UK. Trained in practical approach to toxicology in drug development (American College of Toxicology/British Toxicology Society).Bene had Harvard University part-sponsored training in Cancer Biology & Therapeutic, and received a 2nd Harvard award for a complementary training in COVID-19 and Mental Health for Medical Professionals. Bene has her expertise in evaluation and passion in improving the health and wellbeing. Her open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. Researching in Microbiology, Molecular Biology and Cancer: Her current focus of research (which has yielded eight designed drug models), is on the Investigation of molecular mechanism of colorectal cancer and due to the year 2020 pandemic, has been involved in drug development for COVID-19; she set up a diagnostic laboratory for COVID-19 testing service, and now expanding diagnostic scope. Bene has been speaking in several conferences and published over seven peer reviewed articles, as well as written a chapter in Springer Nature book series on Cancer & Immunology, among which is on COVID-19 and was submitted to the Chief Medical Officer of United Kingdom to assist in response to the pandemic. She is expanding through her years of research, evaluation and teaching to establish Hospital projects in Africa, starting with Nigeria’s state-of-the-art Hospital project.