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Use of SPME-GC-ToF-MS with bioinformatics for the diagnosis of diseases

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Clinical samples are generally complex, containing organic compounds with a wide volatility range as well as inorganic compounds. Using a combination of selective discrimination to select the optimal sampling and sample introduction techniques, gas chromatography to separate the selected analytes, mass spectrometry to detect all of the resolved analytes and bioinformatics to identify differences between the clinical samples, the possibility of using GC-MS as a non-invasive diagnostic method to characterise diseases is discussed. The development of the methodology to analyse the headspace above urine samples is presented for the diagnosis of bladder cancer, prostate cancer and hepatic disorders.

Biography

Diane Turner is the Founder and Director of Anthias Consulting. A Warwick University Graduate, Diane started her career as an Analytical Chemist, later gaining significant experience as an Applications Chemist. Diane has developed methods for, given support and high-quality training for companies in most industries around the world for the past 18 years. Diane's area of research is disease diagnosis at The Open University through her PhD studies. Diane is an elected member of the Royal Society of Chemistry Analytical Division Council. 1 Hamden Way, Papworth Everard, Cambridge, CB23 3UG, United Kingdom

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