

MEET THE EDITOR

Meet our Editorial Board Member: Dr. William van Dongen



William D. van Dongen

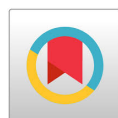
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Dr. van Dongen, initially trained as laboratory technician, became fascinated in the early 90s by LC-MS technology and immediately recognized its potential. As a result, he pursued his studies by obtaining a Master of Science degree at the Free University in Amsterdam (1993) in small molecule LC-MS. During his M.Sc. research he worked on the development of LC-MS methods for polar pesticides in surface water under the supervision of professor Rob Vreeken [1,2].

Subsequently William obtained his Ph.D. degree (1996) in peptide and protein Mass Spectrometry under the supervision of Professor Wigger Heerma. The main aim of his Ph.D. research was to fill in the gaps, that at that time still existed, in the understanding of the fragmentation behavior of essential sequence ions of peptides (B- and C" type ions) [3-6]. Moreover, he studied the cause of the essential changes in fragmentation pathways as a result of specific amino acid residue substitutions. Fragmentation information obtained from a large number of experiments, enabled him to answer not only "how" do peptides fragment, but also "why" do peptides fragment the way they do [7,8]. Besides these fundamental mass spectrometric studies, he also probed the capabilities of mass spectrometric methods, using the insight gained from the fundamental studies, to solve biochemical problems [9-12].

Directly after his PhD, William stepped into industrial bioanalysis. At that time LC-MS was the rising star in bioanalysis and several bioanalytical CROs in the Netherlands, e.g. Pharma Bio-Research (presently named PRA) and ABL (presently Ardena) in Assen, TNO in Zeist, Notox (presently Charles River) in Den Bosch, were heavily investing in LC-MS technology. It was therefore a logical step for William, having a Ph.D. in mass spec, to initiate his professional career in bioanalytical LC-MS. From 1996-2002 William worked as Study Director/Research Chemist at PRA and TNO where he was involved in building up its bioanalytical LC-MS facilities. He gained extensive scientific expertise in the development and validation of quantitative bioanalytical LC-MS methods for small molecule, peptide and biopharmaceutical drugs and their metabolites in biological fluids (plasma, urine, tissue, etc.), see also refs [13-16]. Moreover, during his time working at the 2 CROs, William enjoyed working with Sponsors, and travelled all over the world to introduce LC-MS to the pharma industry. Also, he then developed his talent for promoting and developing new technologies and bioanalytical market opportunities (e.g. automated sample preparation [15], peptide LC-MS). To be complete, in 2005, he returned to his old position at TNO, where he designed and implemented a successful commercial LC-MS bioanalytical platform for therapeutic proteins [22-26]. During his TNO come back, he also developed several analytical (metabolomics) tools for the discovery



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of biomarkers and bioactive compounds and safety assessment of complex mixtures or non-intentionally added substances (NIAS) [18-19]. Illustrative is the development of an analytical platform to unravel complex carbohydrate mixtures in baby food, mother's milk and others [18]. The carbohydrate platform was successfully applied to the infant nutrition constituent galacto-oligosaccharide (GOS) in infant nutrition. The data of this research was applied to obtain the FDA status: Generally Recognized As Safe (GRAS).

At a certain moment in time William became very curious about the "other" side; and pursued his career in start-up biotech, medium sized and big pharma, where he used his expertise and capabilities to build the bioanalytical programs for several successful new drug products. He worked for Synthron, ProQR therapeutics and TEVA. He especially enjoyed his time at ProQR, a startup biotech working on therapeutic oligonucleotides, where he became responsible for the Product Characterization and the Bioanalysis group [20-21]. His main accomplishments at ProQR were the design and execution of the complete bioanalytical and analytical CMC portfolio required for clinical studies of the two main compounds of ProQR, including the "high potential" drug QR-110 (<https://www.pro-qr.com/sepofarsen-phase-1-2-study-001-for-lebers-congenital-amaurosis/>).

To look at William from the scientific perspective, he is (co-)author of 39 refereed papers (h-index 18) mainly in the field of small molecule, peptide and protein mass spectrometry and bioanalytical LC-MS.

Privately, William has a wife with three children, he likes rowing, sailing, he is a certified drone pilot, and loves good and especially bad movies.

Selected Publications

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