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## **Acuitas' Analytical & Bioanalytical Director and Research Scientist Co-Author Article in *Analytical Chemistry* with Scientists from Waters Corporation**

Vancouver, B.C. – Researchers from Acuitas' Analytical Development Team Drs. Jon Le Huray, and Razvan Cojocaru, collaborated with scientists from Waters Corporation to study the application of ion pairing reversed phase (IP-RP) and size exclusion chromatography-based analytical assays to quantify and characterize multiple messenger RNA (mRNA) cargos in mRNA lipid nanoparticle (LNP)-based medicines.

After “deformulating” the mRNA LNP by disrupting the LNP with detergents and removing the lipids, the liberated mRNA payloads can be separated by ion pairing reverse phase and size exclusion chromatography, allowing reproducible and detailed analysis of the mRNA cargo of LNP. Importantly, this approach allows analysis of LNP containing multiple RNA payloads. The analysis of the cargo included RNA quantitation, characterization of specific impurities and detection of mRNA-lipid adducts. These easy-to-adopt, high throughput LC-based assays expand the available analytical toolbox for the rapidly emerging field of mRNA LNP-based gene therapy medicines and makes the analytical workload more efficient. (*Analytical Chemistry* 2025)

Please click [here](#) to read the publication.

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