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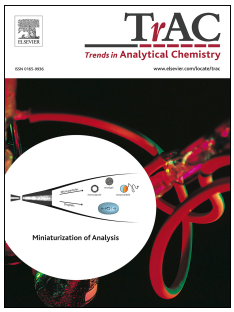

Advanced Metallomics Methods in Anticancer Metallodrug Mode of Action Studies

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Advanced Metallomics Methods in Anticancer Metallodrug Mode of Action Studies

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Abstract

The development of more potent metal-based drugs relies heavily on the understanding of their metabolism in biological environments. Although the specific physicochemical properties of metal ions and their coordination compounds allow the application of element-specific techniques to track their fate after administration to a living organism, the ease of ligand exchanges makes speciation and target identification a challenge. In this review, we discuss selected examples of novel analytical metallomics methods utilizing mass spectrometric detectors often hyphenated with separation systems, and their application to anticancer metallodrug research. An emphasis is put on how these techniques help research to advance in this important scientific area with ultimate ambition of introducing new anticancer agents into clinical development and use.