

Why Can't We All Just Get Along: An Integrated Approach to Solving ADME Issues

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The last ten years has witnessed remarkable advances in the development of medium and high throughput assays to aid in compound optimization in drug discovery with respect to Absorption Distribution Metabolism and Excretion (ADME) liabilities. The emphasis has generally been on maximizing the throughput of these assays. A combination of organizational structures and the mindset of analytical chemists appears to have lead to the individual optimization of these assays without much regard to how they interrelate. These assays have been successful in measuring the properties that they were designed to measure, however measuring properties is only an analytical endpoint. The true endpoint is discovering novel chemical entities in a more timely and efficient manner that have the required ADME properties to allow them to progress into pharmaceutical development and have them not fail for ADME reasons. With a mindset towards how to most efficiently help support the discovery of compounds with desirable ADME properties we have adopted a more integrated approach where the emphasis is on assays with sufficient sensitivity for the intended purpose that have the efficiency of analytical integration, but more importantly are integrated from a scientific interpretation and decision making perspective. Obtaining the right types of information of sufficient quality that is meaningfully integrated on a smaller number of compounds can have a greater impact on compound discovery than screening vast numbers of compounds through the most sensitive analytical assays with the highest possible throughput.