Recent Developments in High-Throughput Synthesis Utilizing Supported Reagents and Flow Chemistry

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Parallel synthesis has proven to be a highly effective and increasingly popular tool in organic and medicinal chemistry. The use of automation to accelerate the lead development and optimization processes in pharmaceutical research is a logical and useful extension of this technology. In the High-Throughput Organic Synthesis group at Abbott Labs we utilize microwave-accelerated synthesis, standardized reaction protocols, polymer assisted solution phase chemistry, flow synthesis, and automation in an effort to create libraries of analogs rapidly and efficiently. This presentation will describe reaction protocols, flow chemistry and automation platforms that have been developed and utilized for this purpose in the drug discovery process at Abbott Laboratories.