

Small Molecule Tools to Investigate Chemical and Biological Processes

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Small molecules are useful tools and are routinely used to probe chemical as well as biological processes. This seminar will highlight the use of chemical probes as chemotherapeutic agents targeting (a) mitochondrial-dysfunction related diseases (b) *Mycobacterium tuberculosis* and other drug-resistant infectious diseases. The use of small molecules in total synthesis of tetrahydrofuran-ring containing biologically active natural products and development of synthetic methods for assembly of fluorinated heterocycles will also be discussed.