

FLUORINE CHEMISTRY FOR APPLICATIONS IN MEDICINE

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The invention of chemical reactions to create fluorine-containing molecules is an important aspect of modern medicine. Positron Emission Tomography (PET) with short-lived ^{18}F -radiotracers is an imaging modality that can diagnose diseases, and monitor how patients respond to therapy. Moreover, the stable isotope ^{19}F is commonly used in drug discovery to identify lead molecules and improve their properties. In this lecture, we will provide an overview of the key reactions we have developed to advance fluorine-based medicine, a rewarding process that has enhanced our fundamental understanding of fluorine chemistry, more specifically fluoride reactivity.