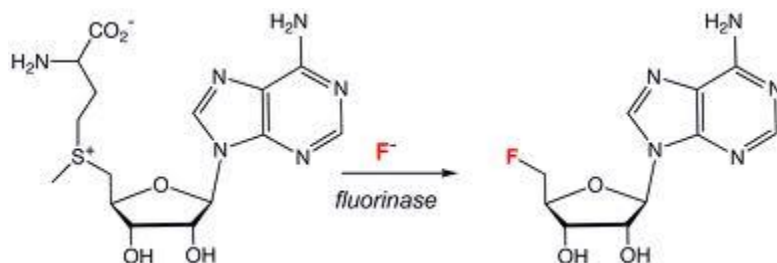


Fluorination with an Enzyme and Applications towards Positron Emission Tomography for Clinical Imaging

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The lecture will highlight the discovery and isolation of the only known fluorination enzyme so far in Nature. The structure and mechanism of the enzyme will be described and then our recent work in using the enzyme as a catalyst to form C-F bonds with the fluorine-18 isotope will be described. The lecture will illustrate how the fluorinase can be used to isotopically label peptides and proteins for clinical imaging.

Recent references:

- [1] S. Dall'Angelo, N. Bandaranayaka, A. D. Windhorst, D. J. Vugts, D. van der Born, M. Onega, L. F. Schweiger, M. Zanda, D. O'Hagan, *Nuclear Med. Biol.*, **2013**, *40*, 464-470.
- [2] S. Thompson, Q. Zhang, M. Onega, S. McMahon, I. Fleming, S. Ashworth, J. H. Naismith, J. Passchier, D. O'Hagan; *Angew. Chemie, Int. Ed.*, **2014**, *53*, 8913-8918.