## NOVEL PET IMAGING AGENT TO PROBE AD

Radiopharmaceuticals for PET imaging are a noninvasive means to detect the onset and progression of Alzheimer's disease. While several radiopharmaceuticals have been approved for clinical, they all suffer from nonspecific binding. As such, novel radioligands could help to further understand the disease pathogenesis.

Represented on the cover, the Featured Letter by Cary et al. (DOI: 10.1021/ml500413d) describes the synthesis, radio-labeling, and preclinical evaluation of N2-bidentate chelators for use in PET imaging of beta amyloid rich plaques in the brain. The study is an important contribution to the field of Alzheimer's disease and adds to the armamentarium of imaging agents to further elucidate the complex mechanisms underlying the metallobiology of this disease.
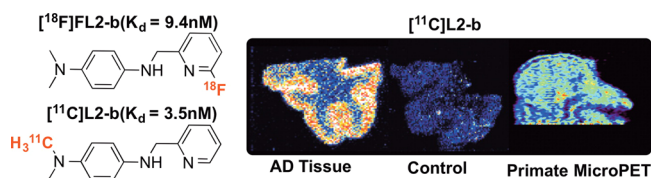
ORALLY ACTIVE COMPOUND AGAINST COLITIS

CB2 cannabinoid receptor agonists are of interest for the treatment of various diseases and conditions including inflammatory bowel disease. However, only a limited number of CB2 agonists were shown to be active against colitis. Thus, there is a need for orally active drugs in this poorly explored disease field.
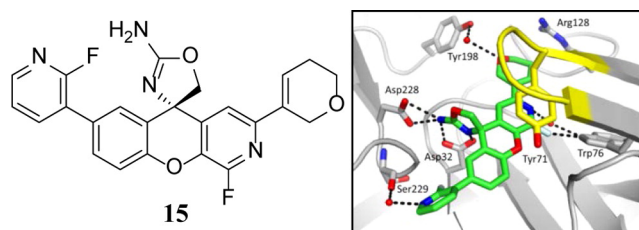
Here, El Bakali et al. (DOI: 10.1021/ml500439x) describe the discovery of a series of selective cannabinoid CB2 receptor agonists. One lead compound was identified as active against experimental colitis after oral administration in mice and presents an opportunity for drug optimization.
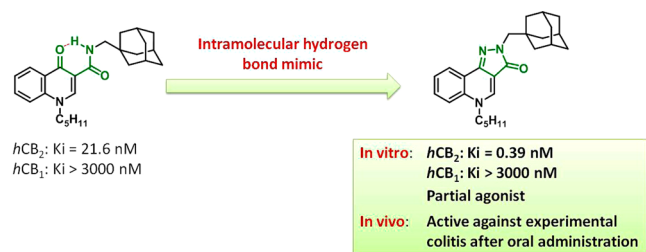
ORALLY AVAILABLE BACE1 INHIBITOR

Alzheimer's disease accounts for the majority of dementia cases identified each year, and a treatment that directly modifies the progression of the disease remains one of the largest unmet medical needs. Aggregation and deposition of β-amyloid peptides, produced by aspartyl protease β-site APP cleaving enzyme-1 (BACE1) and γ-secretase, play an essential role in disease pathogenesis. Thus, BACE1 is a prime target for the development of Alzheimer's disease therapies.

The Letter by Cheng et al. (DOI: 10.1021/ml500458t) describes their exciting study on the discovery of a novel xanthene-based BACE1 inhibitor with significant efficacy and optimized pharmacokinetic profile in a series of relevant in vitro and in vivo biological models. The report is of high interest to researchers looking toward development of BACE1 inhibitors as well as other CNS drug candidates.