THE HEBREW UNIVERSITY OF JERUSALEM האוניברסיטה העברית בירושלים

Institute of Chemistry המכון לכימיה

ORGANIC SEMINAR ANNOUNCEMENT

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Synthesis and applications of enantiomerically enriched polysubstituted 4-nitroprolinates

Thursday, May 25rd 2017, at 14:00
Seminar Hall, Los Angeles Building
Gathering & Refreshments at 13:45

Abstract

The family of 4-nitroprolinates emerged in 2005 as promising therapeutic agents, for instance as inhibitors of a_4b_1-integrin-mediated hepatic melanoma, in murine model of colon carcinoma metastasis and with potent antiadhesive properties in several cancer cell lines. Here we will describe the enantioselective synthesis of *exo*-4-nitroprolinates by metal-catalyzed 1,3-dipolar cycloadditions of azomethine ylides and nitroalkenes. These compounds have been applied in organic synthesis as chiral organocatalysts in aldol reactions, as intermediates in the synthesis of potential inhibitors of farnesyl transferase (FTI), as 1,3-dipole precursors in the synthesis of polysubstituted pyrrolizidines and as starting amines in Amine-Aldehyde-Dienophiles (AAD) sequences.