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Title:	Stereoselective synthesis of trans-3-functionalized-4-pyrazolo[5,1-b]thiazole-3-carboxylate substituted β -lactams: Potential synthons for diverse biologically active agents
Authors:	Mandal, S.K. (/jspui/browse?type=author&value=Mandal%2C+S.K.)
Keywords:	Cycloaddition Pyrazolo[5,1-b]thiazole-3-carboxylate Single crystal X-ray Stereoselective Trans- β -Lactams
Issue Date:	2020
Publisher:	Taylor and Francis Inc.
Citation:	Synthetic Communications, 50(19), pp.2969-2980 .
Abstract:	An efficient protocol for the stereoselective synthesis of pyrazolo[5,1-b]thiazole-3-carboxylate tethered β -lactam conjugates 8a-j from novel pyrazolo [5,1-b]thiazole-3-carboxylate substituted Schiff's bases 6a-f is reported here. The reaction between various ketene precursors and novel Schiff's bases 6a-f afforded exclusive formation of trans- β -lactams 8a-j. The substrate scope of this approach was investigated extensively by varying different groups (R, Z). All the novel compounds were characterized using various spectroscopic techniques, such as FT-IR, ^1H NMR, ^{13}C NMR, elemental analysis, ^{13}C NMR (DEPT-135), and mass spectrometry in representative cases. Single crystal X-ray crystallographic study of trans-ethyl 7-(1-(4-methoxyphenyl)-4-oxo-3-phenoxazetidin-2-yl)-6-methyl-2-(methylthio)pyrazolo[5,1-b]thiazole-3-carboxylate 8a has confirmed the molecular structure and the stereochemical outcome. To the best of our knowledge, the synthesis of such types of Schiff's bases and β -lactam conjugates has not been reported so far.
Description:	Only IISERM authors are available in the record.
URI:	https://www.tandfonline.com/doi/full/10.1080/00397911.2020.1788599 (https://www.tandfonline.com/doi/full/10.1080/00397911.2020.1788599) http://hdl.handle.net/123456789/3464 (http://hdl.handle.net/123456789/3464)
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