EXPLORING AN ENOLATE-CLAISEN REARRANGEMENT ROUTE TO LUCENTAMYCIN A AND RELATED 3-ALKYL-4-ALKYLIDENEPROLINES.

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Lucentamycin A, a natural tripeptide isolated from the marine bacteria *Nocardiopsis lucentensis*, exhibits significant cytotoxicity toward HCT-116 human colon cancer cells *in vitro* (IC50 = 0.20 μM). Structural elucidation revealed a polysubstituted 4-ethylidene-3-methylproline (Emp) residue unprecedented in the natural product literature. We utilized ethyl lactate as a chiral progenitor and an enolate-Claisen rearrangement as the key step to install the relative Emp stereochemistry. Comparison of physical data between natural and synthetic compounds suggests the need for structural revision. Synthesis of the putative structure and extension of the enolate-Claisen methodology to related Emp diastereomers will be discussed.