

Chemical Transformations of 9,11-Ethano-13,15-isoxazolinoprostanoids

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Abstract - Chemical transformations of 9,11-ethano-13,15-isoxazolinoprostanoids furnished new prostanoids with a functional fragment of β -hydroxyketone and γ -aminoalcohol in the ω -chain. The reaction of β -hydroxyketones with methanesulfonyl chloride gave rise to prostanoids with an enone component in the ω -chain. 9,11-Ethano-16-thiaprostanoids were prepared for the first time by nucleophilic addition of thiols to the polarized double bond in the ω -chain. The 1,3-dipolar addition to terminal alkenes of nitrile oxides generated from nitromethylene derivatives of bicycloheptane provided 9,11-ethano-13,15-isoxazolinoprostanoids with an alkyl, phenyl, or additional heterocyclic fragment in the ω -chain.