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**Synthesis, spectroscopic characterization and crystal structure of 3,5-F2C6H3C(O)N(H)P(O)X, X= NH-CH2-C(CH3)2-CH2-NH: The first**

**example of an aliphatic diazaphosphorinane with an anti orientation of C=O versus P=O**

**Samad Shoghpour, Mehrdad Pourayoubi\*, Mojtaba Keikha**

*Department of Chemistry, Ferdowsi University of Mashhad, P.O. Box 91779-1436, Mashhad, Iran*

*mehrdad\_pourayoubi@yahoo.com,* *s.shoghpour@gmail.com*

A new phosphoric triamide compound with formula 3,5-F2C6H3C(O)N(H)P(O)X2, X2= NH-CH2-C(CH3)2-CH2-NH (**1**) was synthesized and characterized by 1H, 13C, 19F, 31P{1H} NMR, IR spectroscopy, CHN elemental analysis and X-ray crystallography. This is the first example of an aliphatic diazaphosphorinane in which the oxygen atoms of phosphoryl and carbonyl groups are located in anti positions toeach other. Compound **1** forms a 1D ladder chain from centrosymmetric dimmers that are produced by intermolecular P=O…H-N hydrogen bonds. The 1H NMR and 13C NMR spectra show 3J(H,F) and 1-3J(C,F). The 13C NMR spectrum of compound **1**, containing sixmembered ring diamine group, shows that 3J(P,Caliphatic) >2J(P,Caliphatic).