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SYNTHESIS AND ANALYSIS OF SHORT CHAIN LINEAR CARBOPEPTOIDS DERIVED FROM A NOVEL SUGAR AMINO ACID

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Sugar amino acids (SAAs) are structurally diverse class of sugar-based molecular entities that can be utilized as building blocks in design of new biologically active analogs of natural biopolymers [1]. Some of such sugar-based oligopeptides have already proven to mimic the structural characteristics of some well known natural macromolecules [2,3].

We report here synthetic strategy towards a novel ribose derived γ-SAA **2**. Commercially available diacetone-α-D-glucose **1** was used as a starting material in a multistep synthesis. Acquired SAA monomer **2** was further used in the synthesis of the corresponding homooligopeptides **3**.

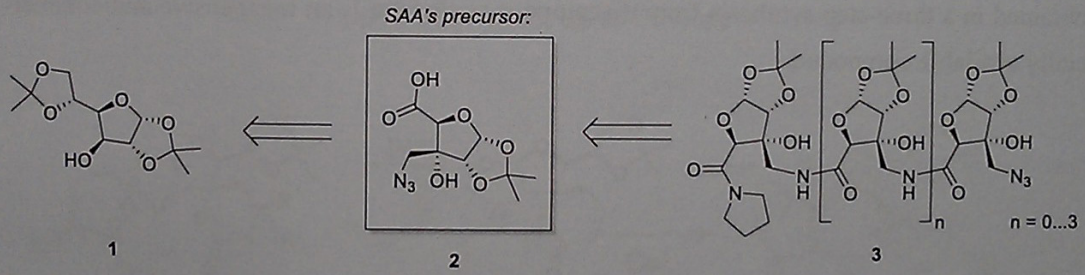

Fig. 1. Synthesis of SAA **2** and carbopeptoid **3**

^{1}H-NMR-based solvent titration method was applied to analyze oligomers **3** and provided evidence for possible intramolecular hydrogen bonding.

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