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# SYNTHESIS AND ANALYSIS OF LINEAR HOMOLOGOMERS FROM A NOVEL $\gamma$ -SUGAR AMINO ACID

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Sugar amino acids (SAAs) are structurally diverse class of compounds that can be utilized as a building blocks for designing new biologically active analogs of natural biopolymers.<sup>1</sup> SAAs oligomers have already proven to mimic the structural characteristics of some well known natural macromolecules.<sup>2,3</sup>

We developed synthetic strategy towards a novel SAA – ribofuranose- $\gamma$ -sugar-amino acid. Commercially available diacetone- $\alpha$ -D-glucose **1** was used as a starting material in a multistep synthesis, that afforded  $\gamma$ -azidoacid **2**. Considering compound **2** as the *N*-protected precursor of our target SAA, it was further used as a monomer in the synthesis of the corresponding homooligopeptides.

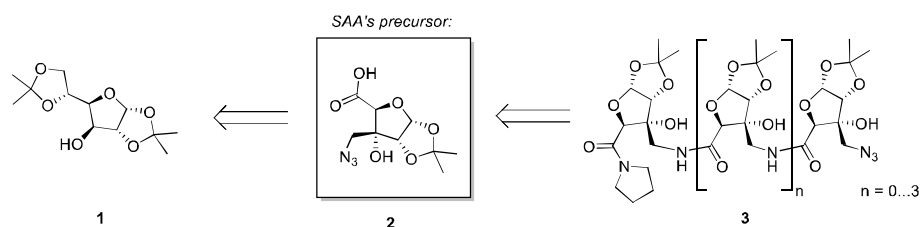


Fig. 1. Synthesis of SAA and its oligomers

Specific <sup>1</sup>H-NMR-based solvent titration method provided evidence for possible intramolecular hydrogen bonding in latter oligosaccharides **3**. We assume that further elongation of these oligopeptides will lead to novel SAA oligomers that will form well-ordered secondary structures.

## References

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