BICYCLIC IMINOSUGARS AS POTENTIAL GLYCOSIDASE INHIBITORS

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Glycosidases (or glycoside hydrolases) play a crucial role in breaking down glyosidic bonds, making them essential for the catabolism of carbohydrates in all living organisms. Given their fundamental biological significance and the therapeutic advantages associated with targeting these enzymes pharmacologically, there is a considerable motivation for the development of new inhibitor classes. Compounds capable of selectively inhibiting these enzymes are the conformationally locked sugar analogues cyclophellitol (**1**), cyclophellitol aziridine (**2**), α-cyclosulfate (**3**), β-cyclosulfate (**4**) [1] or basic sugar analogues such as the iminosugar 1-deoxynojirimycin (**5**) and its numerous derivatives [2,3]. Motivated by the compelling biological prospects offered by these two substance classes, this presentation will showcase the design, synthesis, and potential biological applications of new bicylic iminosugars, exemplified by compounds **6** and **7** (Figure 1.).

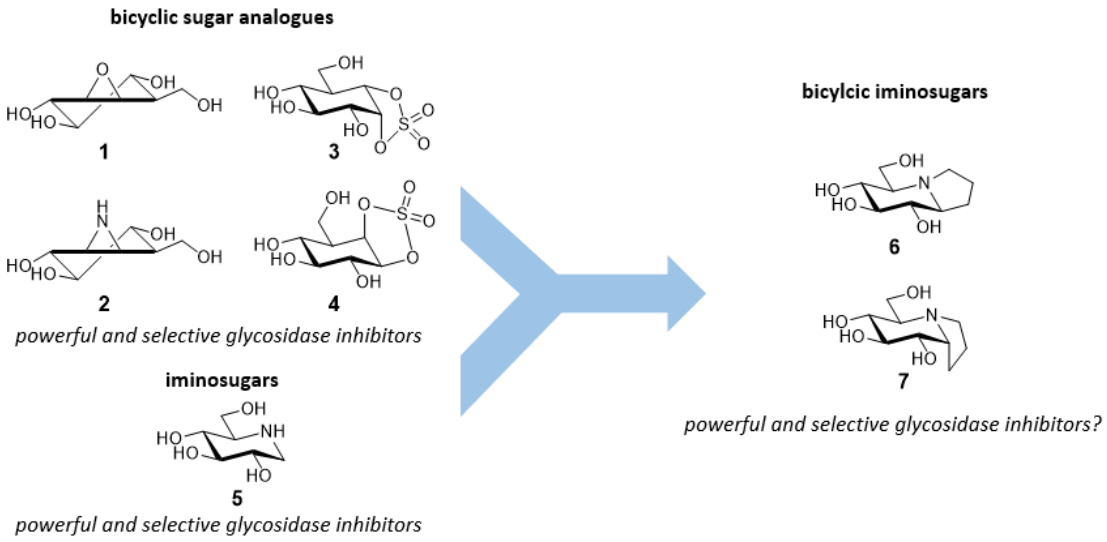

Figure1. Bicyclic iminosugar as potential glycosidase inhibitors.

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