

Paul, S.; Jayaraman, N., 2008 “Synthesis of 2-deoxy-D-arabino/lyxo-hexopyranosyl disaccharides”, *Carbohydr. Res.*, 343, 453 – 461.

This manuscript results from an on-going work on the synthesis of biologically relevant 2-deoxy disaccharides. A series of 2-deoxy disaccharides, having D-arabino- and D-lyxo-configurations are synthesized by a glycosylation involving activated 2-deoxy-1-thioglycoside donor, advanced by us in a dedicated programme. The activated 2-deoxy-1-thioglycoside glycosylation route facilitates synthesis of various 2-deoxy disaccharides, in which the 2-deoxy sugar unit is either in the non-reducing end or the reducing end or both the sugar units of the disaccharides. The facile synthesis allowed preparing six mono- and dideoxy disaccharides in reasonably good yields. 2-Deoxy sugar containing derivatives, corresponding to 2-deoxy maltose, 2,2'-dideoxy maltose and 2-deoxy lactose, have so far been achieved through enzymatic methods. The chemical method, which is presented in the manuscript, relies on the judiciously placed protecting groups on both the glycosyl donors and acceptors, thereby extending such inevitable protecting group manipulations to the 2-deoxy disaccharide synthesis. The 2-deoxy-, 2,2'-dideoxy disaccharides presented in the manuscript are important sugar units in the enzymatic studies and biological studies with antibiotic molecules.