

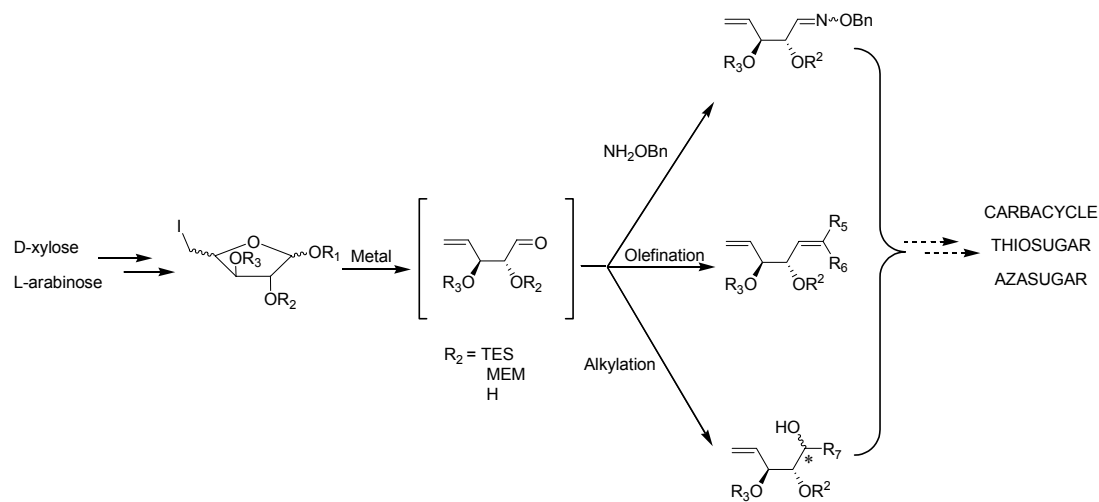
## D-XYLOSE AND L-ARABINOSE AS RAW MATERIALS FOR THE SYNTHESIS OF ENANTIOMERICALLY PURE POLYFUNCTIONALIZED BUILDING-BLOCKS

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The ring-opening of deoxy-halogeno-glycoside by reductive elimination with metals (Zn, Mg...) allows the simultaneous formation of a terminal double bond and an aldehyde function. Most examples involve 6-deoxy-6-halogeno-hexopyranosides<sup>[1]</sup> and, in the furanosides series, 5-deoxy-5-halogeno-D-ribofuranosides.<sup>[2]</sup> Much less attention has been paid to D-xylose and L-arabinose derivatives,<sup>[3]</sup> despite that these sugars are the main components of hemicelluloses, an abundant co-product of wheat industry.

We have undertaken a research programme to explore the synthesis of enantiomerically pure compounds by a common way from D-xylose or L-arabinose (Scheme). These chiral compounds would be precursors of various modified carbohydrates such as azasugars, thiosugars, or carbacycles...



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