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Being present in many interesting bioactive molecules the uncommon polysaccharides have an essential role in medicinal chemistry. Unfortunately, the synthesis of this class of compounds is usually iterative and needs to carry out several tiresome steps of protection and deprotection of the different functionalities present on the molecule. Because a medicinal program needs a large number of analogs to find an interesting active compound, we developed a new methodology based on ring-rearrangement metathesis that allow to synthesise efficiently this kind of polysaccharides in few steps while introducing molecular diversity very easily. Moreover because this approach is avoiding a considerable number of the protecting steps that are usually necessary and because the olefin-metathesis key step is generating several carbon-carbon bonds in one reaction, we think that this methodology is ecologically positive and fits to the concept of "green chemistry".