

## Chapter III

### Conclusion

The strategy of using a hydroxylamine moiety as a means of tethering nitrogen to oxygen gave two interesting results. Firstly, the results of the cyclofunctionalization reaction of the terminal alkene hydroxylamines, which were protected by carbamate groups, gave the isoxazolidines as single isomers. The product from the cyclofunctionalization is the 1,3-*cis*-isomer. Secondly, the tether of the O-N bond is more atom-economical because the oxygen and nitrogen are protected by each other. The tether can be retained for protection or can be cleaved by hydrogenolysis to give 1,3-*syn*-amino alcohols.

The strategy will be a useful key step for the total synthesis of derivatives of 1,3-amino alcohols, such as sedum alkaloids, when the O-N bond is cleaved.



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