

Camilla Matassini, Stefania Mirabella, Xhenti Ferhati, Cristina Faggi, Inmaculada Robina, AndreaGoti, Elena Moreno-Clavijo, Antonio J. Moreno-Vargas and Francesca Cardona, (2014). Polyhydroxyamino piperidine iminosugars and pipercolic acid analogs from a D-mannose derived aldehyde. *Eur. J. Org. Chem.*, 5419–5432.

A general strategy for the synthesis of diversely substituted 3,4,5-trihydroxypiperidines (including two natural products), 5-amino-3,4-dihydroxypiperidines, 3,4,5-trihydroxypipercolic acids, and 2-(aminomethyl)-3,4,5-trihydroxypiperidines is reported. The procedure used a double reductive amination or a Strecker reaction, starting from differently protected aldehydes readily synthesized on a gram scale from D-mannose. The biological activities of the target compounds were evaluated, and some of them showed moderate inhibition of α -L-fucosidase and β -glucosidase.