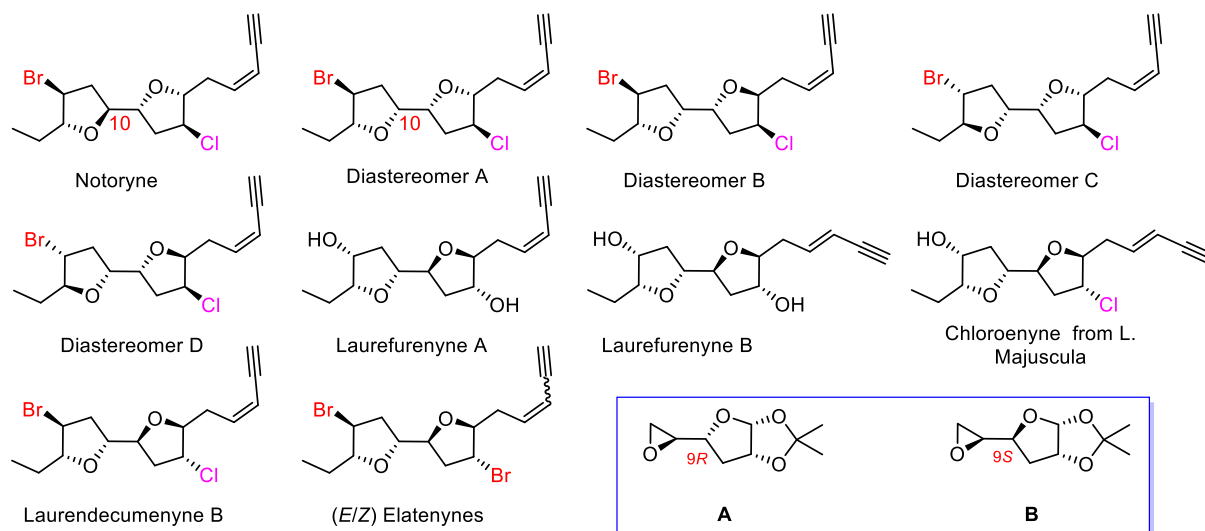


## Total Synthesis of *bis*-THF C15 Acetogenins

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### Abstract:

The *bis*-THF C15 Acetogenins comprises as a special members of Acetogenin class of natural products.<sup>1</sup> Due to the difficulties associated with their structural elucidation has attracted a great deal of synthetic attention. The structure of these natural products comprises a halo/hydroxy *bis*-THF unit along with an ene-yne unit. The conformational flexibility of THF rings has led to miss assign the structures of many of these family members such as Chloroenyne from *L. Majuscula*, Elatenynes A/B, Laurefurenynes A/B, and Laurendecumenyne B. A brief details of our total synthesis of all these natural products employing simple building blocks derived from D-glucose.<sup>2</sup> The relative and absolute stereochemistry of these natural products are assigned by comparing the <sup>13</sup>C NMR chemical shift values with the previous reports and by 2D NMR analysis.<sup>3</sup>



**Figure 1.** Structures of Representation *bis*-THF C<sub>15</sub>-Acetogenins

### References and Notes:

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## Bio-Sketch of Speaker

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Dr. Ramana obtained his MSc. from Andhra University, Waltair (1991) and PhD from University of Hyderabad under the supervision of Professor M. Nagarajan (Synthetic Carbohydrate Chemistry). From 1998 to 2001 he was associated with Professor Andrea Vasella at ETH Zurich as a post-doctoral researcher (glycosidase inhibitors). From May 2001 onwards, he had been associated with National Chemical Laboratory (CSIR, India). At NCL, the focus of Ramana's group includes small molecules synthesis by employing transition metal complexes and developing new catalytic methods. The major focus of Dr. Ramana's group is the total synthesis of natural products and biologically important targets with a keen insight into developing new methods and extending the platform for the synthesis of pharmaceutically relevant small molecules. In general, his group is known decorating the total synthesis canvas with metal reagents and demonstrate designing of new synthetic tools involving the orchestration of sequential events in one-pot with one catalyst. In addition to this, his group also works in the areas of beta-peptides, C-saccharides synthesis, glyconanoparticles and application of C–H activation in non-infringing processes development.

He is a recipient CSIR Young Scientist award in Chemical Sciences (2003), NCL's Scientist of the Year award (2009), Professor D. K. Banerjee Memorial Lecture Award - IISc Bangalore (2011) and CRSI Bronze Medal in chemical sciences (2013) and Dr. A.V. Rama Rao Foundation Prize Lecture in Chemistry (2016) and CNR Rao National Prize in Chemical Sciences (2017). He is the fellow of Indian Academy of Sciences (2014, Bangalore). To his credit, he had 130 publications, 17 patents and 21 students have been awarded PhD. degree under his supervision.