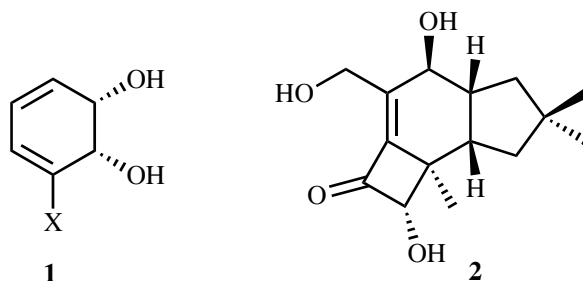




**Project 3: Chemical Elaboration of Microbially-derived *cis*-1,2-Dihydrocatechols to Create New Chirons for Use in the Total Synthesis of Natural Products**

*cis*-Dihydrocatechols of the general form **1** are obtained in large quantity and enantiomerically pure form through the whole-cell mediated dihydroxylation of the corresponding arene. We have used such compounds extensively as starting materials in the chemical synthesis of a range of structurally diverse natural products.<sup>1</sup> This project will involve studies on the chemical manipulation of compound **1** (X=Me) so as to introduce additional substituents on the diene moiety and thus generate “starting materials” that should be particularly useful in synthesizing sesquiterpenoid natural products such as the anti-germination agent tsugicoline A (**2**).



**References**

1. See, for example, O. J. Kokas *et al.*, *Tetrahedron*, 2008, **64**, 6444.

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