

## Special Invited Lecture

57<sup>th</sup> Annual Convention of Chemists (ACC) - Indian Chemical Society (ICS)  
Recent Trends in Chemical Sciences (RTCS 2020)

### Total Synthesis of Peribysins and Hypothetical Analog of Migrastatin

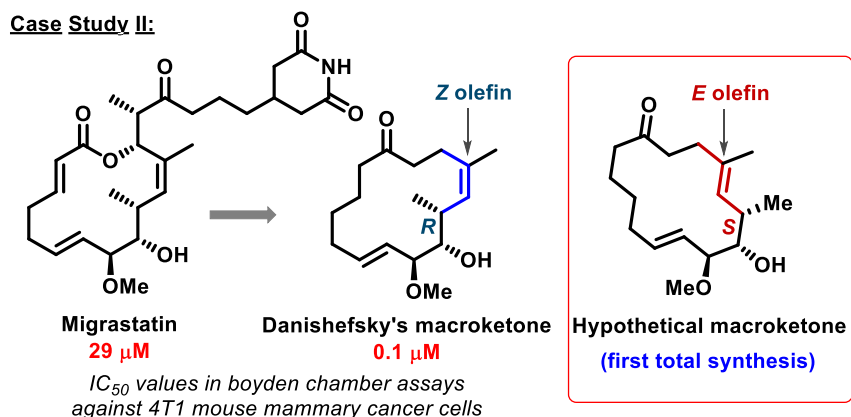
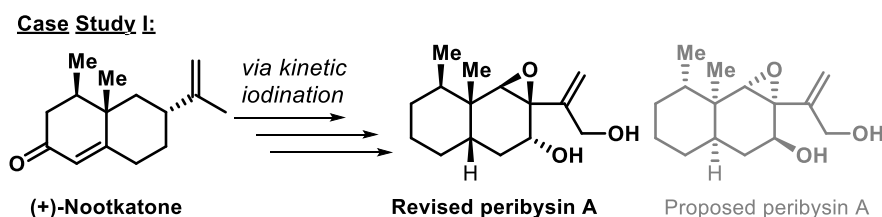
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#### Abstract:

Natural products continue to encourage discoveries in the field of chemistry, biology, and medicines due to their vast structural and chemical diversity. As part of continued research in our group, we are engaged in synthesis of various natural products of good biological importance. Two such case studies will be discussed. After first total synthesis of peribysin E by Danishefsky's group and isolation of a few more peribysins by Hashimoto's group; ambiguity arise about original structural assignments of peribysins by Yamada and co-workers.<sup>1,2</sup> We addressed all these ambiguities by achieving total synthesis of six members of peribysin family natural products starting from (+)-nootkatone.<sup>3</sup> One more such structural ambiguity<sup>4</sup> about the simplified macroketone associated with an anticancer natural product migrastatin was also addressed by achieving its total synthesis for the first time.<sup>5</sup>



#### References and Notes:

1. (a) Yamada *et al.* *J. Antibiot.* 2006, 59, 345. (b) Yamada *et al.* *Org. Biomol. Chem.* 2004, 2, 2131.
2. (a) Angeles *et al.* *J. J. Am. Chem. Soc.* 2008, 130, 13765. (b) Angeles, *et al.* *Angew. Chem. Int. Ed.* 2007, 46, 1451
3. Athawale *et al.* *Org. Lett.*, 2020, 22, 3104.
4. (a) Weiss *et al.* *Cancer Metastasis Rev.* 2000, 19, 193-383. (b) Fidler *et al.* *Nat. Rev. Cancer.* 2003, 3, 453-458. (c) Shan *et al.* *PNAS.* 2005, 102, 3772-3776. (d) Chen *et al.* *Nature.* 2010, 464, 1062-1066. (e) Nagorny *et al.* *Tetrahedron Letters.* 2010, 51, 3873-3875.
5. Choudhury *et al.* unpublished results

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**Bio-Sketch of Speaker**

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