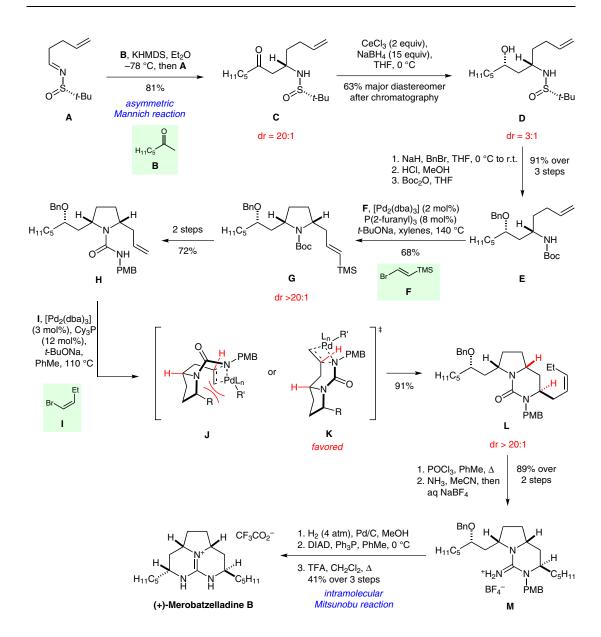
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## N. R. BABIJ, J. P. WOLFE\* (UNIVERSITY OF MICHIGAN, ANN ARBOR, USA) Asymmetric Total Synthesis of (+)-Merobatzelladine B

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## Synthesis of (+)-Merobatzelladine B



Significance: Merobatzelladine B was isolated in 2009 from the marine sponge Monanchora sp. by Matsunaga and co-workers. It exhibits moderate antimicrobial activity and inhibitory effects against a strain of Plasmodium falciparum. It possesses a fused tricyclic guanidine core and two *n*-pentyl chains that are positioned anti to one another.

 $\textbf{SYNFACTS Contributors:} \ Steven \ V. \ Ley, \ Sean \ Newton$ Synfacts 2012, 8(7), 0695 Published online: 19.06.2012 DOI: 10.1055/s-0032-1289843; Reg-No.: N03412SF

Comment: This synthesis utilizes iterative stereoand regioselective palladium-catalyzed carboamination reactions to build two of the three fused heterocycles in good yield and excellent diastereoselectivity. The selectivity of the second carboamination step is attributed to the preferred boat-like transition structure **K**, which minimizes steric hindrance with the previously formed pyrrolidine ring and the metal center.