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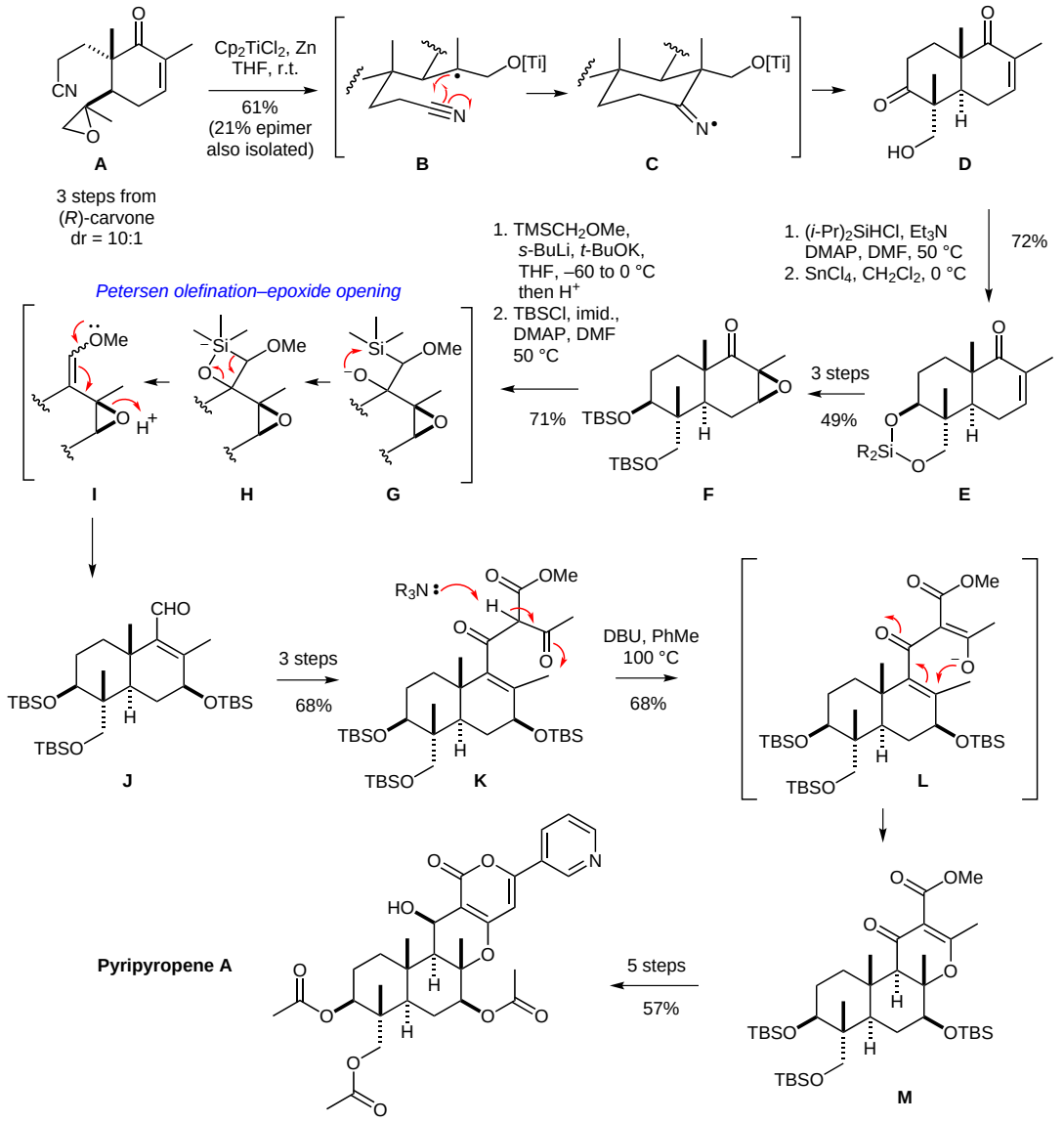
Total Synthesis of Pyripyropene A
Tetrahedron **2011**, *67*, 8195–8203.

Synthesis of Pyripyropene A



Significance: Pyripyropene A is a fungal metabolite isolated from *Aspergillus fumigatus* FO-1289–2501. It is a potent inhibitor of Acyl-CoA:cholesterol-acyltransferase. Several semi-synthetic derivatives show even greater inhibition.

Comment: Key steps in this synthesis include the titanium-mediated epoxide opening–radical cyclization (**A** → **D**) and a Petersen-olefination/epoxide-opening sequence (**F** → **J**). A more scalable sequence from **D** to **F** involving $Me_4NHB(OAc)_3$ as an alternative reducing agent was also reported.

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Category

Synthesis of Natural Products and Potential Drugs

Key words

titanium-mediated radical cyclization

Petersen olefination

pyripyropene A

SYNFACT of the month