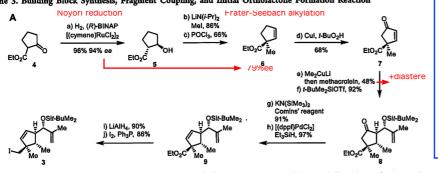
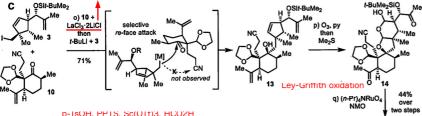
Vincent A. P. RufLukas J. SprengerKirill VolynskiyVanessa M. KandlerNima NasiriErick M. Carreira\*

3,5-aimetnyiorseniilic acia (DIVIOA)-meroterpenoia

//6/5/6/5/5 hexacyclic skeleton , with its unique embedded ortholactone and lactone-acetal cage

## Scheme 3. Building Block Synthesis, Fragment Coupling, and Initial Ortholactone Formation Reaction

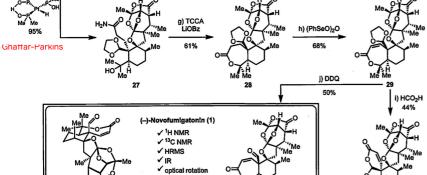




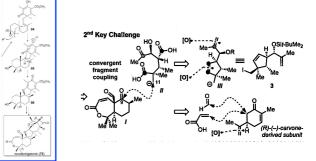
r) (*n-*Pr)<sub>4</sub>NOH then PhI(OAc)<sub>2</sub>, RuCl<sub>3</sub> t) MeC(OEt)<sub>3</sub>

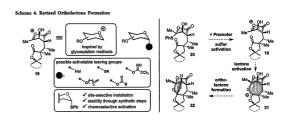
## Scheme 5. Completion of the Synthesis reaction time, base, and stoichiometry: crucial





fused Iactone acetal Me (-)-Novofumigatonin novel ortholactor highly oxidized DMOA-meroterpenoid unique heterocyclic structure Me 7/6/5/6/5/5 hexacyclic skeleton embedded ortholactone & lactone acetal 10 stereogenic centers





a variety of thiophilic activators (N-bromosuccinimide, Br2, Selectfluor, PhSCl, dimethyl-(methylthio)sulfonium trifluoromethanesulfonate, AgPF6 and