

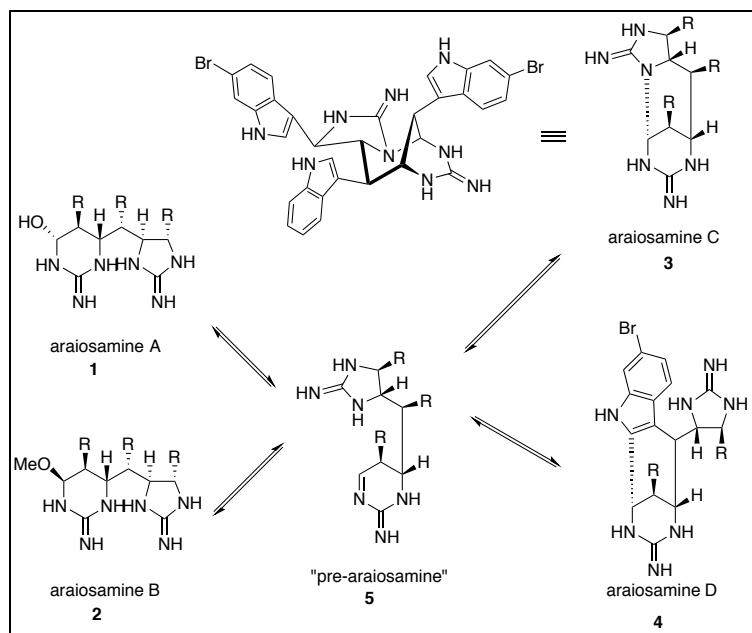
Progress in Total Synthesis

11-Step Total Synthesis of Araiosamines

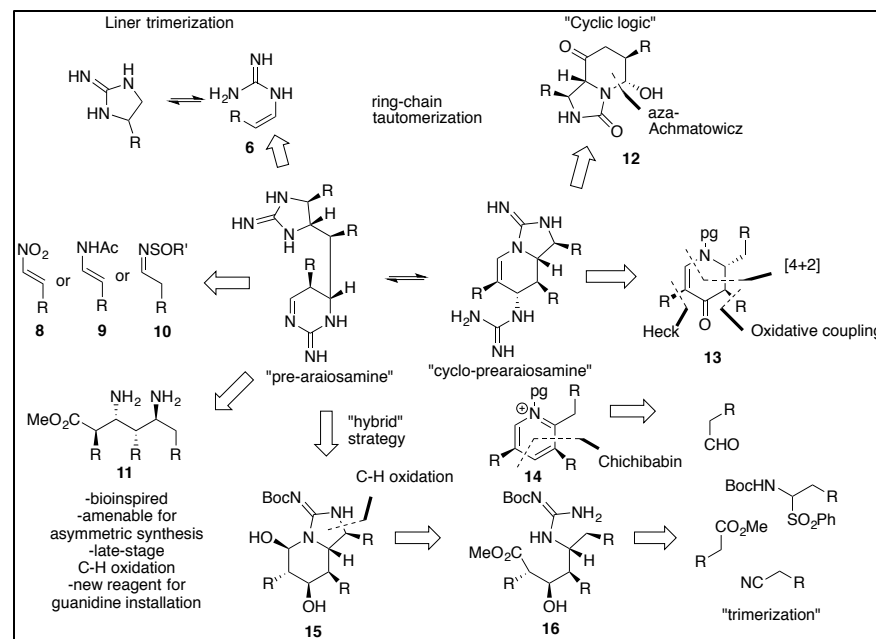
Maoqun Tian, Ming Yan, Phil S. Baran, *J. Am. Soc.* 2016, 138, 14234-14237

Araiosamines A-D were isolated in 2011

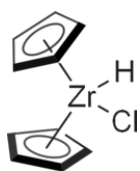
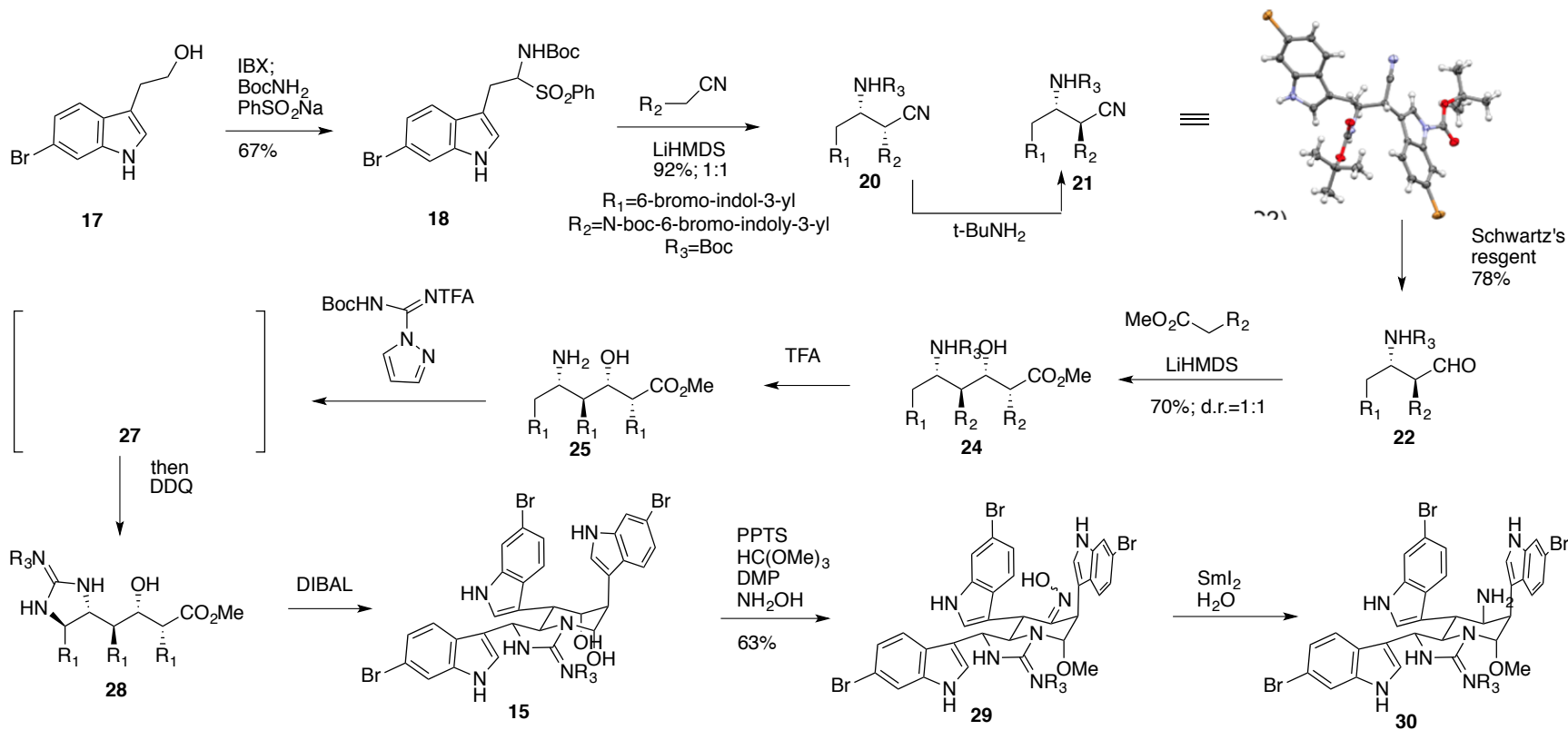
Structure contains two guanidines, three bromoindole heterocycles, six contiguous stereocenters, and unique [4.3.1] bicycle architectures.



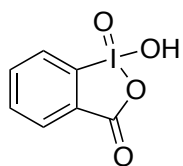
Structures of araiosamines A-D and putative biogenesis



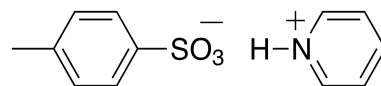
Evolution of synthetic strategies



Schwartz's reagent



2-Iodoxybenzoic acid
IBX

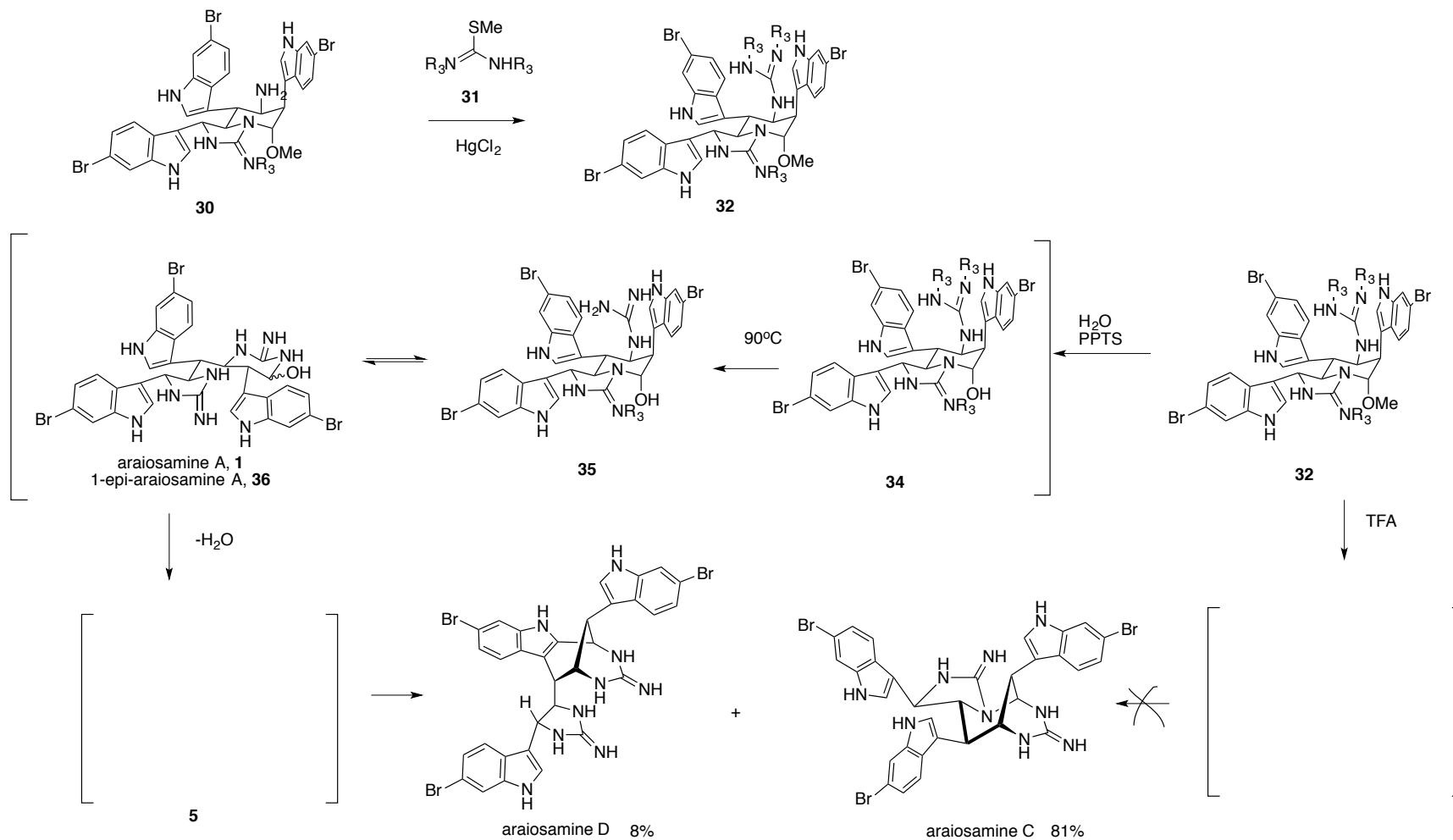


Pyridinium p-toluenesulfonate
PPTS

4. Conditions d.r. (C2)

LiHMDS	1:1
LiHMDS/ZnCl ₂	1:4
LiHMDS/DMPU	1:9
NaHMDS	1:5
LDA	1:2

22-24 conditions



Natural products reported potency erroneously

Ariesamines exhibits considerable activities against both Gram-positive and Gram-negative bacteria