

Total Synthesis of Euphobia B and Discovery of a Selective Inhibitor of Potassium Efflux-Independent NLRP3 Inflammasome Activation
 Chaoyun Xue, Ze Zhang, Zhongpeng Ding, Guobin Xie, Runqin Liu, Fenglin Wang, Jizhuo Yu, Tao Wang, Fei Xue, Hao Song, Qifeng Chen^{1*}, and Yong

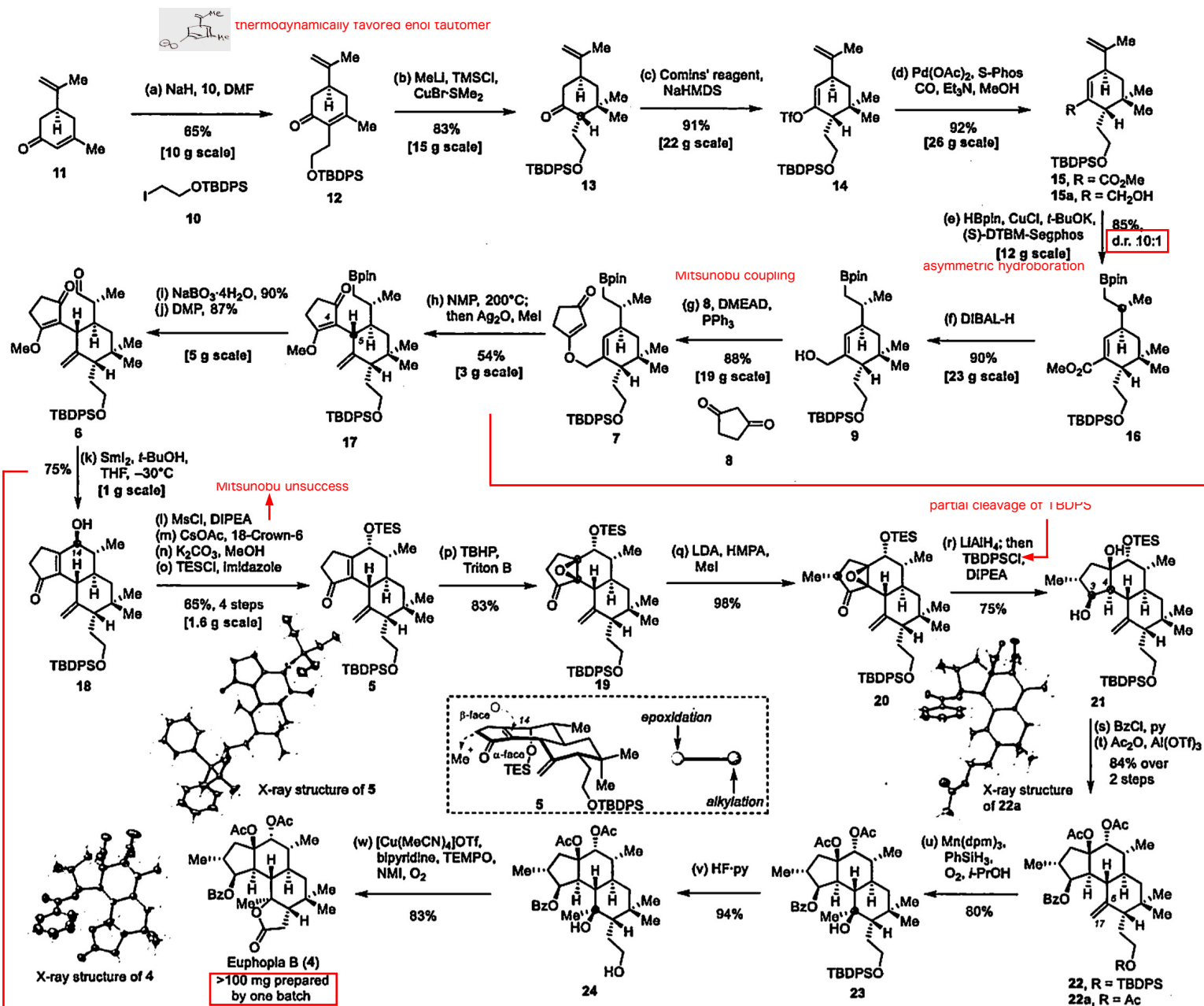
jatrophone diterpenoid

TBDPSO

Euphobia B

NLRP3 inflammasome

thermodynamically favored enol tautomer



partial cleavage of TBDPS

Mitsunobu success

Mitsunobu coupling

asymmetric hydroboration

Mitsunobu success

partial cleavage of TBDPS

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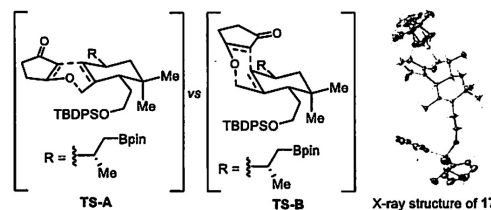
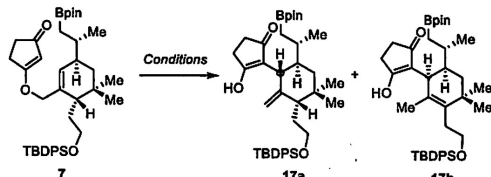
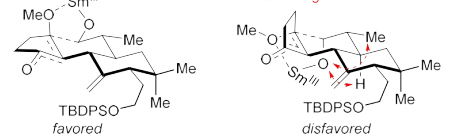
partial cleavage of TBDPS

Mitsunobu success

partial cleavage of TBDPS

TS Analysis

destabilizing steric interactions



entry	conditions	yield (%)	
		17a	17b
1	DMF, 150 °C	38	38
2	DMF, 200 °C	55	36
3	PhCF ₃ , 200 °C	26	38
4	NMP, 200 °C	46	42
5	DMF-H ₂ O (2:1), 200 °C	32	25
6	N,N'-diphenylguanidine BA ² , DMF, 200 °C	38	20
7	Neutral Al ₂ O ₃ , 60 °C	0	0
8	TiCl ₄ , Me ₃ Al, 4 Å MS, CH ₂ Cl ₂ , 0 °C	0	0

^aAll reactions were carried out with substrate 7 in solvent (c = 0.15 M) at the indicated temperature. The conversions and yields were calculated based on the isolated material.