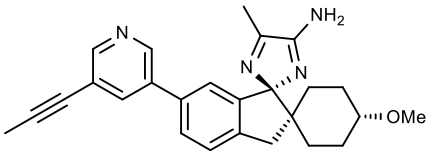
Lanabecestat

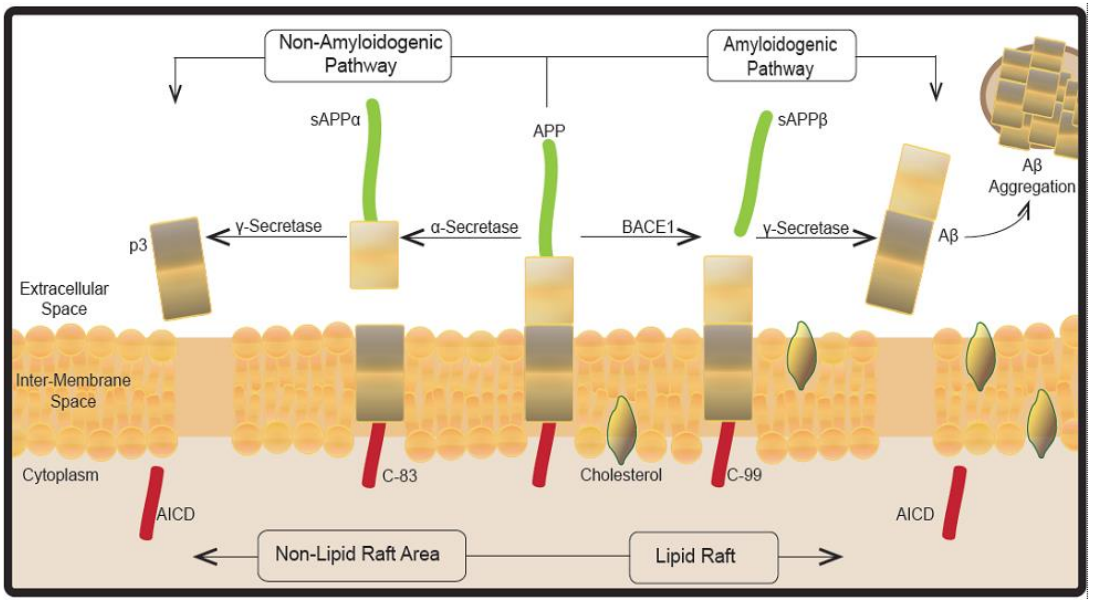


Lanabecestat

Introduction:

- Lanabecestat is a BACE-1 inhibitor originally developed for the treatment of Alzheimer's disease.
- Until recently, formation of Amyloid plaque in the brains of Alzheimer's patients was thought to be the cause of the observed cognitive decline. Inhibition of BACE-1 would prevent the formation of this amyloid plaque, in theory providing a druggable pathway for Alzheimer's disease.
- The drug candidate was developed though a partnership between AstraZeneca and Eli Lilly, and entered two different phase III trials in 2018.
- Ultimately, development of the drug was halted due to a lack of efficacy. The field of Alzheimer's research has now shifted away from BACE-1 inhibitors as a whole.

OPR&D **2018**, *22*, 633.



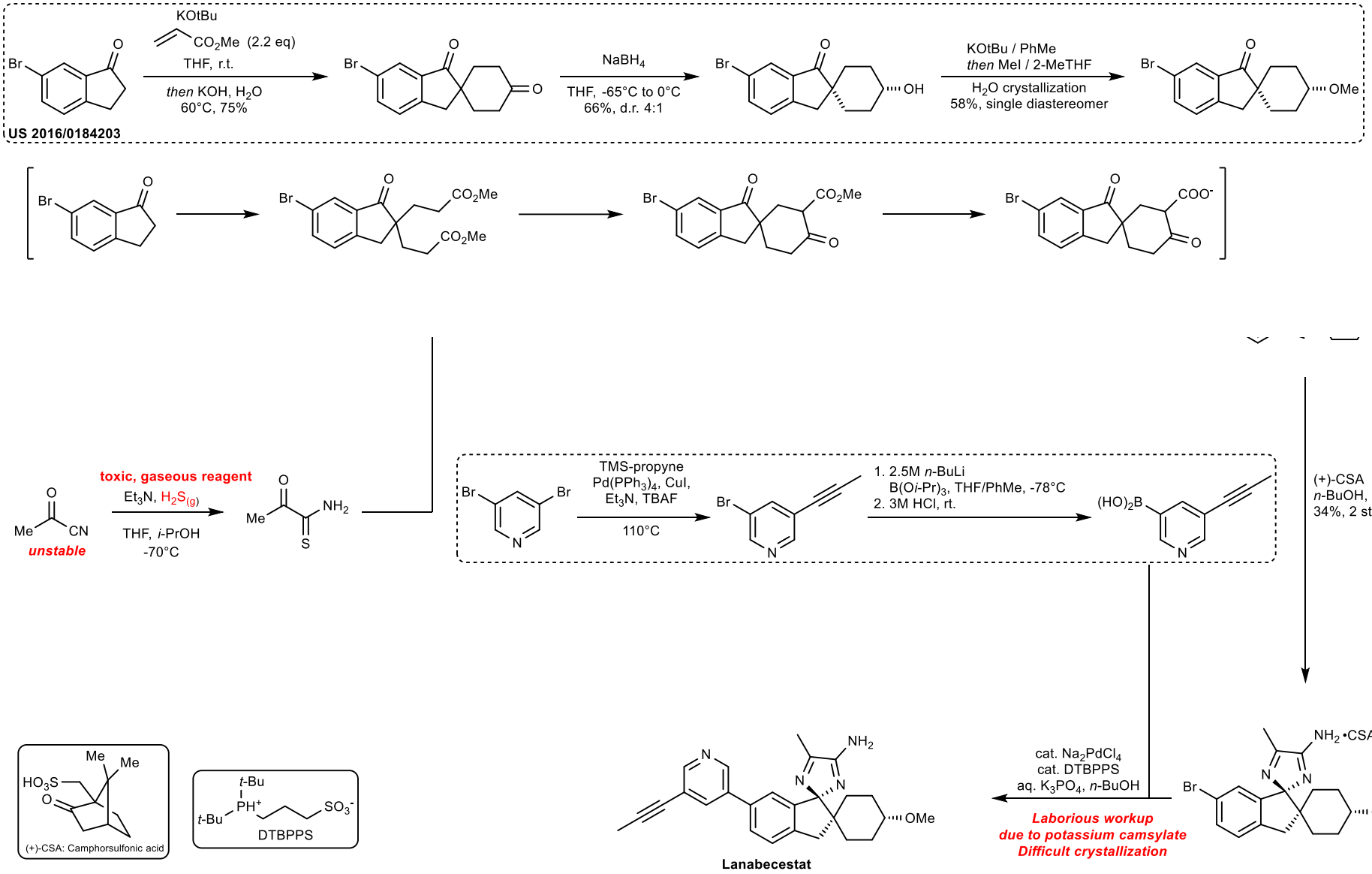
Read, J. S., Cenk (2012). "Dropping the BACE: Beta Secretase (BACE1) as an Alzheimer's Disease Intervention Target."

Arm/Group Title	Placebo	Lanabecestat 20 Milligrams (mg)	Lanabecestat 50 mg
▼ Arm/Group Description	Participants received placebo film-coated oral tablets once daily.	Participants received lanabecestat 20 mg film-coated oral tablets once daily.	Participants received lanabecestat 50 mg film-coated oral tablets once daily.
Period Title: **Placebo-Controlled Treatment Period**			
Started	562	590	570
Received at Least 1 Dose of Study Drug	558	588	568
Completed	26	28	22
Not Completed	536	562	548
Reason Not Completed			
Adverse Event	13	17	13
Death	4	2	3
Lack of Efficacy	0	0	2
Lost to Follow-up	3	3	1
Non-Compliance	0	1	0
Other-determined by Investigator	0	1	2
Physician Decision	3	1	3
Protocol Violation	1	2	0
Withdrawal by Subject	15	20	23
Withdrawal due to Caregiver Circumstance	3	3	9
Sponsor Decision	494	512	492

Results of DAYBREAK-ALZ, one of the two phase III trials for Lanabecestat. https://clinicaltrials.gov/ct2/show/NCT02783573?term=NCT02783573&rank=1

Lanabecestat

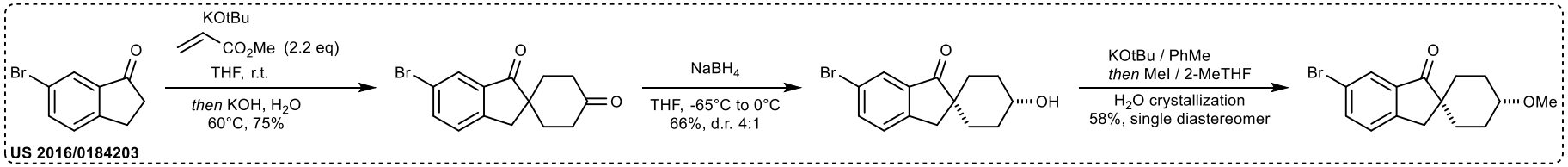
Early Process Route:

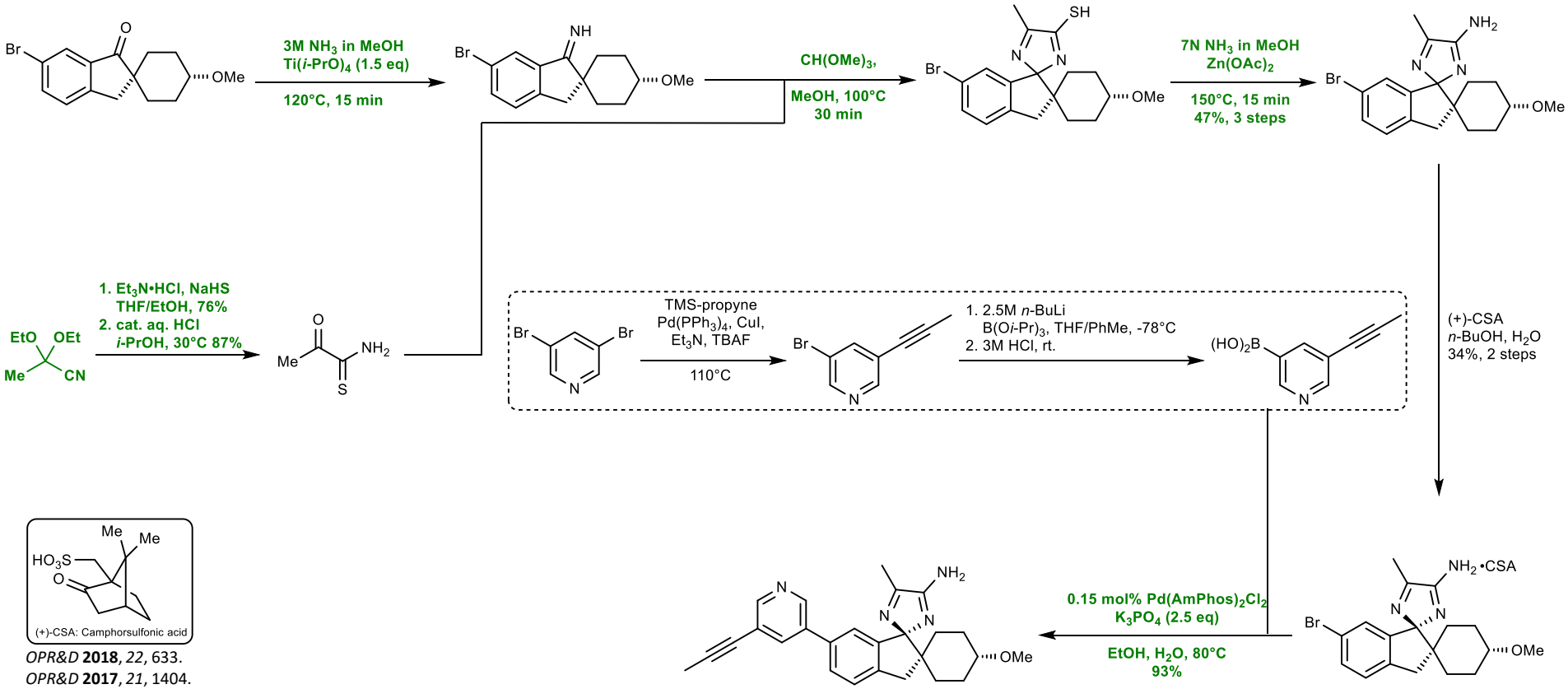


OPR&D **2018**, *22*, 633.

Lanabecestat

Opitimized Route:





OPR&D **2018**, *22*, 633.
OPR&D **2017**, *21*, 1404.
OPR&D **2018**, *22*, 1801.