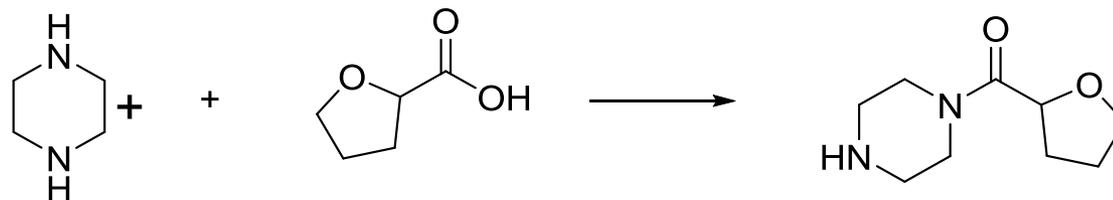


# Which method would you choose?

- Amidation to form 1-(tetrahydrofuran-2-carbonyl)-piperazine (Intermediate in the synthesis of Terazosin, an antihypertensive agent)
- All reactions carried out using 5 mmol each of tetrahydrofuroic acid and piperazine



	Silica	Enzyme	Thionyl	Boric	Triphenyl	HMDS
Yield	15 %	13.6 %	70 %	74 %	82 %	93 %
Method	K60 silica catalyst, solvent free, 120°C, recover product with acetone	immobilised Novozyme catalyst 435 in heptane, r.t.	thionyl chloride (excess) in toluene, 110°C then r.t., extract aq. with DCM	boric acid (catalytic) in toluene, 110°C	triphenyl phosphine, n-bromosuccinimide and pyridine (1 equiv. each) in DCM, 5°C then r.t.	Hexamethyl-disilazane (1 equiv.) in DCM, 110°C