1) RMgX, THF
2) BnBr, K2CO3, DMF
1) TFAA, Et3N, toluene
2) aq. NaOH
1) H2, Pd black, 10% Pd/C, MeOH, HCl 1M
6'
10a (40%) R = vinyl
10b (65%) R = allyl
10c (46%) R = butyl
10d (36%) R = phenyl
11a (64%) R = vinyl
11b (63%) R = allyl
11c (85%) R = butyl
11d (46%) R = phenyl
10a' (14%)
11a' (38%)
12a (quant.) R = ethyl
12b (quant.) R = propyl
12c (quant.) R = butyl
12d (quant.) R = phenyl