Problem Session

OPMB—CH2—C(=O)OH **1.** → PMBO—CH2—C(=O)—N (oxazolidinone, Bn) → **NaN(SiMe3)2** / THF/ toluene, -78°C to 45°C, allyl iodide → **1**

LiBH4, MeOH, Et2O, 0°C

CH2=CH—CH2—CH(OPMB)—CH2OH

1. / **2.** → OH / OPMB intermediate

NaH, ClCH2CONMe2 / THF/DMF → Me2N—C(=O)—CH2—O—CH(...)—OPMB (with vinyl and ethyl groups)

1. / **2.** ↓

Me2N—C(=O)—CH2—O—CH(...)—OPMB aldehyde (O=CH—CH2—)

Ohira- Bestmann reagent (synthesis?) / K2CO3, MeOH / reaction mechanism? → **2**

Pd(AcO)2, PPh3, MeOH, DMF, CO, O2 / RT, 25h → **3**

hexabutylditin, nBuLi, CuCN, MeOH, -78°C, 1h ↓

1. DIBAL-H/nBuLi 3:1, THF, -78°C (name of this complex?) / **2. NaBH4, EtOH** ← **4**

6 ← **CuCl2, THF, 0°C** ← **5**

Ms2O, Et3N, DCM, RT ↓

Cl / MsO—...—OPMB structure with H, ethyl, Me2N—C(=O)—CH2—O—

1. LiBr, THF, RT / **2. LiHMDS, THF, -78°C** → **7** → **1.** → bicyclic product (Cl, OH, Me2N—C(=O), O ring, ethyl)

1. McCl, 2,6-lutidine, DCM / **2. LiBr, Et2O/THF**

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