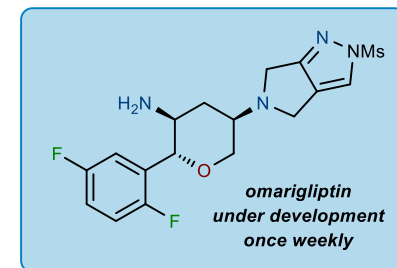
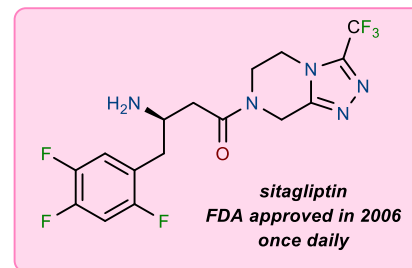


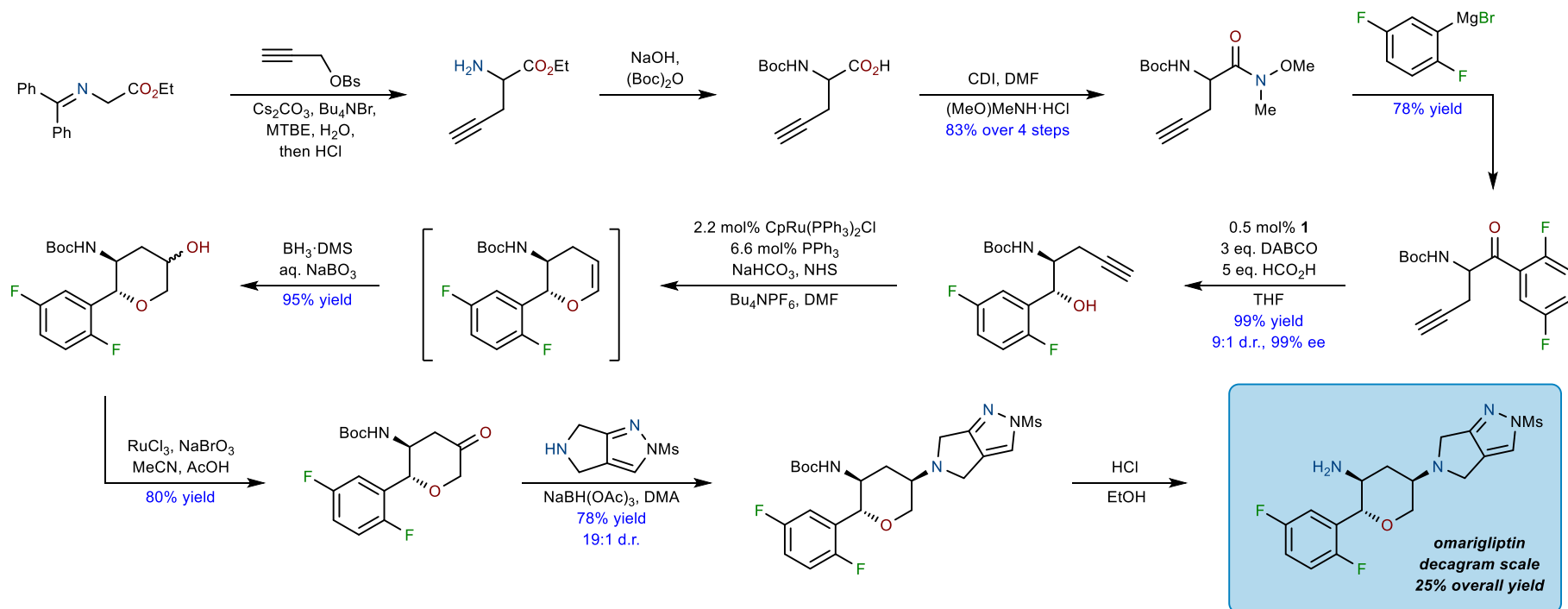
Background

- Type 2 diabetes affects over 366 million people worldwide and over 26 million in the US alone
- Cases of diabetes have been rising for decades, and the disease represents a major cause of premature illness and death in the developed world
- Dipeptidyl peptidase-4 (DPP-4) inhibitors increase insulin production and lower blood sugar levels
- The first commercial DPP-4 inhibitor, sitagliptin, was developed by Merck and approved in 2006
- Omarigliptin has a significantly longer half-life, and was approved in Japan in 2015



Heron, A. *Nature Medicine*. 2006, 12, 75. <https://doi.org/10.1038/nm0106-75>

Second-Generation Route



Xu, F. *Org. Lett.* 2014, 16, 5422. <https://doi.org/10.1021/ol502661g>

Process Route Optimizations

