Synthesis of BACE1 Inhibitor LY3202626

**Significance:** LY3202626 is a beta-secretase 1 (BACE1) inhibitor that was of interest for the treatment of Alzheimer’s disease. The key step in the large-scale synthesis depicted is the intramolecular [3+2] cycloaddition of nitrone E to give isoxazolidine rac-F.

**Comment:** The core bicyclic thiazine L was constructed by reaction of amine K with benzoyl isothiocyanate followed by cyclization of the resultant thiourea (not shown) using CDI. For the discovery synthesis of LY3202626, see: US 2014 0350245 A1.