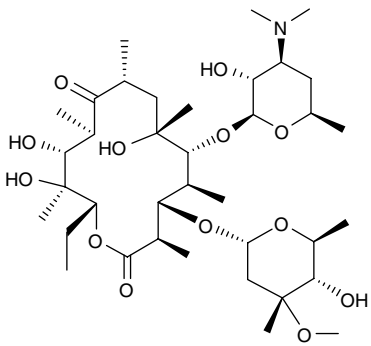
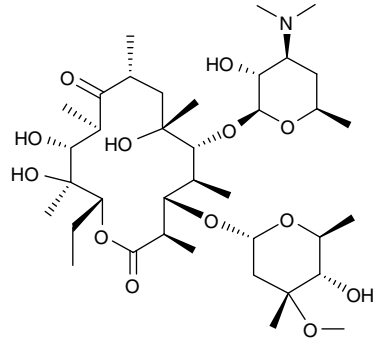
The second is azithromycin (**50**). A very interesting modification was made by Pliva, in what was then Yugoslavia, wherein the 14-ring base macrolide was converted to a 15-ring azalide, chemically named as 9-deoxo-9*a*-aza-9*a*-methyl-9*a*-homoerythromycin A. It was put into clinical use in 1988 in Yugoslavia and was then licensed to Pfizer and approved in the United States in 1991. As with clarithromycin, the NIH clinical trial database currently has 100 studies listed at phase IV, with 81 at phase II, including trials directed at pulmonary tuberculosis and potential use for treatment post tick bites.

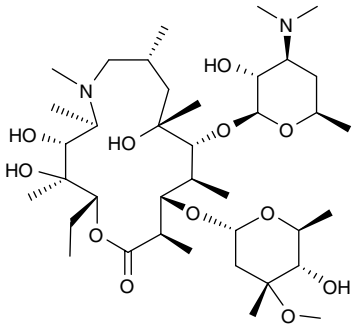
Solithromycin (**51**), which is currently at phase III in Japan for the treatment of community acquired bacterial pneumonia (CABP), is possibly the most "bioactive" erythromycin-derived molecule, but it was pulled from studies in the EU and the United States due to problems associated with the formulation and delivery systems in 2016. The compound was then licensed to Fujifilm Toyama Chemical, and as mentioned above, it is currently at Phase III in Japan, with code numbers JapicCTI-163438, JapicCTI-163439, JapicCTI-163467, and JapicCTI-173733. So in due course, this potent antibiotic might be approved for use.



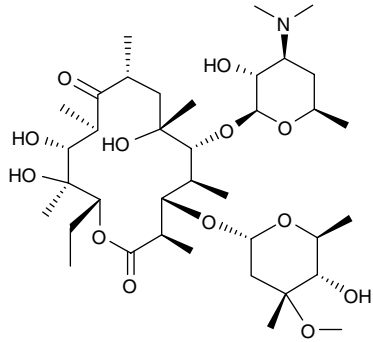
48; Erythromycin



49; Clarithromycin



50; Azithromycin



51; Solithromycin (Phase III Japan)