

23.5 ANTIBIOTICS AFFECTING NUCLEIC ACID SYNTHESIS

23.5.1 ANTIBIOTICS INHIBITING RNA POLYMERASE

RNA polymerase (RNAP) is a nucleotidyl transferase enzyme that catalyzes the formation of RNA from a DNA template. Bacterial RNAPs are highly conserved and differ from their eukaryotic/archaeal/viral counterparts, allowing selective inhibition. RNAP is essential for growth and survival of bacteria. Rifampicin and Fidaxomicin bind at different subsites on RNAP and act by different mechanisms (Figure 23.5; Table 23.2).

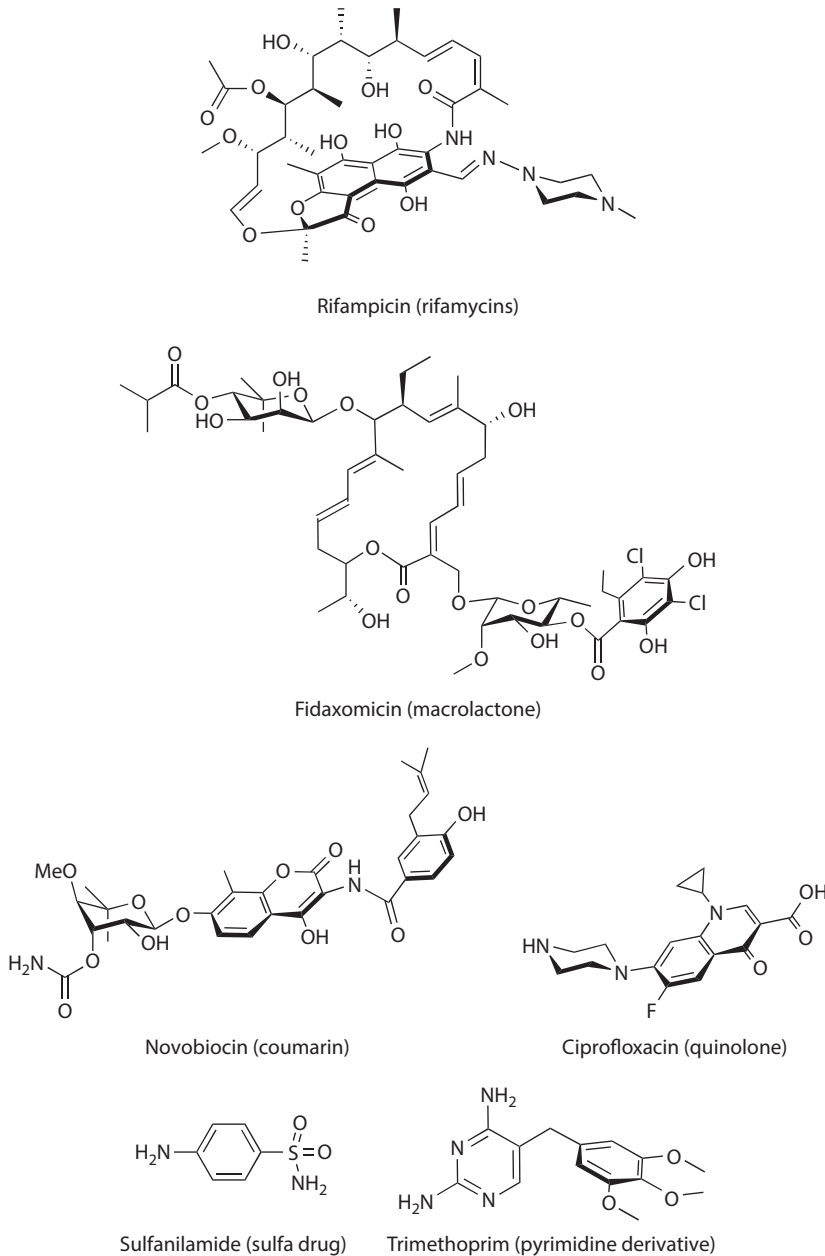


FIGURE 23.5 Representative structures of antibiotics affecting nucleic acid and folate biosynthesis.