rifapentine are being evaluated to see whether they can shorten the TB treatment course to <6 months.

PHARMACOLOGY Rifapentine's absorption is improved when the drug is taken with food. After oral administration, rifapentine reaches peak serum concentrations in 5–6 h and achieves a steady state in 10 days. The half-life of rifapentine and its active metabolite, 25-desacetyl rifapentine, is ~13 h. The administered dose is excreted via the liver (70%).

ADVERSE EFFECTS The adverse effects profile of rifapentine is similar to that of other rifamycins. Rifapentine is teratogenic in animal models and is relatively contraindicated in pregnancy.

RESISTANCE Rifapentine resistance is mediated by mutations in *rpoB*. Mutations that cause resistance to rifampin also cause resistance to rifapentine.

■ SECOND-LINE ANTITUBERCULOSIS DRUGS

Second-line anti-TB agents are indicated for treatment of drug-resistant TB, for patients who are intolerant or allergic to first-line agents, and when first-line supplemental agents are unavailable. According to their usability, they are divided into three WHO groups.

Group A • **FLUOROQUINOLONES** Fluoroquinolones inhibit mycobacterial DNA gyrase and topoisomerase IV, preventing cell replication and protein synthesis, and are bactericidal. Given their excellent activity, they have been investigated for their potential to shorten the course of treatment for drug-susceptible TB from 6 to 4 months. In contrast to prior trials, a recent large, open-label randomized controlled trial (TBTC Study 31) yielded promising results for shortening of TB treatment. Patients with drug susceptible TB disease were randomized to receive either standard six-month TB regimen or 4-month regimen containing rifapentine (8 weeks of once-daily rifapentine, isoniazid, pyrazinamide, and ethambutol followed by 9 weeks of once-daily rifapentine and isoniazid) or 4-month regimen containing rifapentine and moxifloxacin (8 weeks of