Adverse Effects
As for Rifampicin, p.325.

A higher incidence of hyperuricaemia has been reported with rifapentine than with rifampicin.

Precautions
As for Rifampicin, p.326.

Rifapentine is only licensed for use in once- or twice-weekly regimens, and should not be given to HIV-infected patients because of potential interactions with HIV-protease inhibitors; an increased risk of developing resistance to rifamycins with highly intermittent (once- or twice-weekly) dosing regimens may occur in these patients.

Rifapentine is teratogenic in *animals*.

Interactions
As for Rifampicin, p.327.

Enzyme induction studies have suggested that rifapentine is a more potent inducer of cytochrome P450 isoenzymes than rifabutin, but less potent then rifampicin. It should not be used with HIV-protease inhibitors because of the risk of developing resistance, see Precautions, above.

Antimicrobial Action
As for Rifampicin, p.327.

Cross-resistance is common between rifapentine and rifampicin in *Mycobacterium tuberculosis*.

Antimycobacterial action. References.

1. Mor N, *et al.* Comparison of activities of rifapentine and rifampin against Mycobacterium tuberculosis residing in human macrophages. *Antimicrob Agents Chemother* 1995; **39:** 2073–7.
2. Vernon A, *et al.* Acquired rifamycin monoresistance in patients with HIV-related tuberculosis treated with once-weekly rifapentine and isoniazid. *Lancet* 1999; **353:** 1843–7.

Pharmacokinetics
Rifapentine is absorbed after oral doses. Absorption is enhanced by about 50% when rifapentine is taken with food. Peak plasma concentrations are achieved 5 to 6 hours after a single dose of 600 mg and steady-state concentrations are achieved by day 10 during daily use. A half-life of about 13 hours has been reported. Rifapentine undergoes nonoxidative metabolism and does not induce its own metabolism. Rifapentine and its active metabolite 25-deacetylrifapentine are 98% and 93% bound to plasma proteins, respectively.

Rifapentine and 25-deacetylrifapentine are excreted mainly in the faeces with a small amount appearing in the urine.

◊ References.

1. Keung ACF, *et al.* Pharmacokinetics of rifapentine in patients with varying degrees of hepatic dysfunction. *J Clin Pharmacol* 1998; **38:** 517–24.
2. Keung AC-F, *et al.* Pharmacokinetics of rifapentine in subjects seropositive for the human immunodeficiency virus: a phase I study. *Antimicrob Agents Chemother* 1999; **43:** 1230–3.
3. Conte JE, *et al.* Single-dose intrapulmonary pharmacokinetics of rifapentine in normal subjects. *Antimicrob Agents Chemother* 2000; **44:** 985–90.
4. Weiner M, *et al.* Pharmacokinetics of rifapentine at 600, 900, and 1,200 mg during once-weekly tuberculosis therapy. *Am J Respir Crit Care Med* 2004; **169:** 1191–7.
5. Langdon G, *et al.* Population pharmacokinetics of rifapentine and its primary desacetyl metabolite in South African tuberculosis patients. *Antimicrob Agents Chemother* 2005; **49:** 4429–36.

Uses and Administration
Rifapentine is a rifamycin antibacterial (see Rifampicin, p.325) that is used, with other antimycobacterials, for the treatment of tuberculosis (p.196).

For drug-susceptible organisms rifapentine is given orally in a dose of 600 mg twice weekly during the initial intensive phase of short-course tuberculosis regimens, then once weekly during the continuation phase.

◊ Reviews.

1. Jarvis B, Lamb HM. Rifapentine. *Drugs* 1998; **56:** 607–16.
2. Munsiff SS, *et al.* Rifapentine for the treatment of pulmonary tuberculosis. *Clin Infect Dis* 2006; **43:** 1468–75.

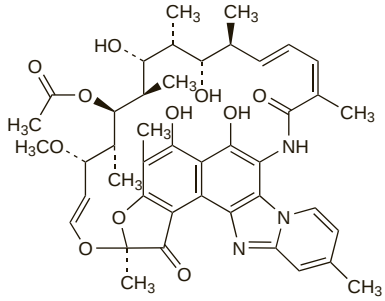
Preparations
Proprietary Preparations (details are given in Part 3)
USA: Priftin.

Rifaximin *(USAN, rINN)*

L-105; Rifaxidin; Rifaximina; Rifaximine; Rifaximinum. (2*S*,16*Z*,18*E*,20*S*,21*S*,22*R*,23*R*,24*R*,25*S*,26*S*,27*S*,28*E*)-5,6,21,23,25-Pentahydroxy-27-methoxy-2,4,11,16,20,22,24,26-octamethyl-2,7-(epoxypentadeca[1,11,13]trienimino)benzofuro[4,5-e]pyrido[1,2-*a*]benzimidazole-1,15(2*H*)-dione 25-acetate.

Рифаксимин

$C_{43}H_{51}N_3O_{11}$ = 785.9.
CAS — 80621-81-4.
ATC — A07AA11; D06AX11.
ATC Vet — QA07AA11; QD06AX11; QG51AA06; QJ51XX01.



NOTE. The code L-105 has also been applied to the cephalosporin cefuzonam.

Profile
Rifaximin is a rifamycin antibacterial with antimicrobial actions similar to those of rifampicin *in-vitro* (p.327), but which is poorly absorbed from the gastrointestinal tract, having a bioavailability of about only 0.4%. Therefore, it does not have the usual adverse effects or interactions of rifampicin. Hypersensitivity reactions, including exfoliative dermatitis and angioneurotic oedema have been reported. Rifaximin should not be given to patients with travellers' diarrhoea complicated by fever or blood in the stool.

It has been licensed in the USA and some other countries for the treatment of travellers' diarrhoea caused by noninvasive strains of *Escherichia coli*. It has also been tried for other gastrointestinal disorders, including infectious diarrhoea in nontravellers, inflammatory bowel disease, abdominal distension, bloating, and flatulence, small bowel bacterial overgrowth, diverticulitis, Crohn's disease, for surgical infection prophylaxis, and hepatic encephalopathy (p.1697).

For the treatment of travellers' diarrhoea in those 12 years of age and older, the recommended oral dose is 200 mg three times daily for 3 days. Doses given for other indications range from 600 to 1200 mg daily, in 2 to 4 divided doses.

Rifaximin has also been used topically as a 5% ointment.

◊ References.

1. Gillis JC, Brogden RN. Rifaximin: a review of its antibacterial activity, pharmacokinetic properties and therapeutic potential in conditions mediated by gastrointestinal bacteria. *Drugs* 1995; **49:** 467–84.
2. DuPont HL, *et al.* Rifaximin versus ciprofloxacin for the treatment of traveler's diarrhea: a randomized, double-blind clinical trial. *Clin Infect Dis* 2001; **33:** 1807–15.
3. Pakyz AL. Rifaximin: a new treatment for travelers' diarrhea. *Ann Pharmacother* 2005; **39:** 284–9.
4. Robins GW, Wellington K. Rifaximin: a review of its use in the management of traveller's diarrhoea. *Drugs* 2005; **65:** 1697–1713.
5. Ericsson CD. Safety and tolerability of the antibacterial rifaximin in the treatment of travellers' diarrhoea. *Drug Safety* 2006; **29:** 201–7.
6. Adachi JA, DuPont HL. Rifaximin: a novel nonabsorbed rifamycin for gastrointestinal disorders. *Clin Infect Dis* 2006; **42:** 541–7. Correction. *ibid.*; 896. [dose frequency]
7. Pimentel M, *et al.* The effect of a nonabsorbed oral antibiotic (rifaximin) on the symptoms of the irritable bowel syndrome: a randomized trial. *Ann Intern Med* 2006; **145:** 557–63.
8. Fumi AL, Trexler K. Rifaximin treatment for symptoms of irritable bowel syndrome. *Ann Pharmacother* 2008; **42:** 408–12.

Diverticular disease. Rifaximin may be used in the management of diverticular disease (p.1695); for reference to its use in combination with mesalazine see p.1747.

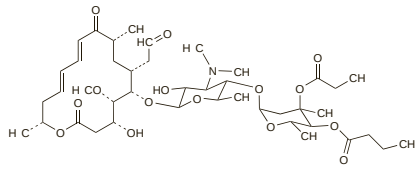
Preparations
Proprietary Preparations (details are given in Part 3)
Cz.: Normix; ***Gr.:*** Lormyx; Rifacol; ***Hung.:*** Normix; ***Ital.:*** Normix; Rifacol; ***Mex.:*** Flonorm; Redactiv†; ***Pol.:*** Xifaxan; ***Port.:*** Flonorm; ***Spain:*** Spiraxin; Zaxine; ***USA:*** Xifaxan.

Rokitamycin *(rINN)*

M-19-Q; 3″-Propionyl-leucomycin A_5; Rikamycin; Rokitamicina; Rokitamycine; Rokitamycinum; TMS-19Q. [(4*R*,5*S*,6*S*,7*R*,9*R*,10*R*,11*E*,13*E*,16*R*)-7-(Formylmethyl)-4,10-dihydroxy-5-methoxy-9,16-dimethyl-2-oxooxacyclohexadeca-11,13-dien-6-yl]-3,6-dideoxy-4-*O*-(2,6-dideoxy-3-*C*-methyl-α-L-*ribo*-hexopyranosyl)-3-(dimethylamino)-β-D-glucopyranoside 4″-butyrate 3″-propionate.

Рокитамицин

$C_{42}H_{69}NO_{15}$ = 828.0.
CAS — 74014-51-0.
ATC — J01FA12.
ATC Vet — QJ01FA12.



Pharmacopoeias. In *Jpn*.

Profile
Rokitamycin is a macrolide antibacterial with actions and uses similar to those of erythromycin (p.269). It has been given orally in usual doses of 400 mg twice daily in the treatment of susceptible infections.

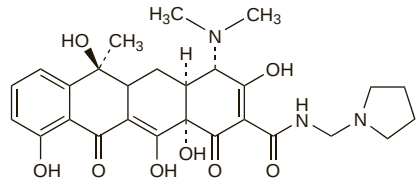
Preparations
Proprietary Preparations (details are given in Part 3)
Ital.: Paidocin; Rokital.

Rolitetracycline *(BAN, USAN, rINN)*

PMT; Pyrrolidinomethyltetracycline; Rolitetraciclina; Rolitétracycline; Rolitetracyclinum; Rolitetracyklin; Rolitetrasykliini; SQ-15659. N^2-(Pyrrolidin-1-ylmethyl)tetracycline.

Ролитетрациклин

$C_{27}H_{33}N_3O_8$ = 527.6.
CAS — 751-97-3.
ATC — J01AA09.
ATC Vet — QJ01AA09.



Profile
Rolitetracycline is a tetracycline derivative with general properties similar to those of tetracycline (p.347). It is included in some topical eye preparations used for the treatment of susceptible infections. It has also been given by injection, when it has been associated with shivering and, more rarely, rigor, due to a Jarisch-Herxheimer reaction. Injection has also been followed by a peculiar taste sensation, often similar to ether.

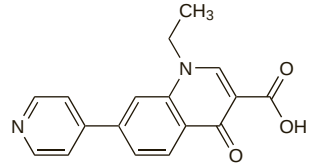
Preparations
Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Arg.:*** Eubetal Biotic†; ***Ital.:*** Colbiocin; Eubetal Antibiotico; Vitecaf; ***Rus.:*** Colbiocin (Колбиоцин).

Rosoxacin *(BAN, USAN, rINN)*

Acrosoxacin; Rosoksasiini; Rosoxacine; Rosoxacino; Rosoxacinum; Win-35213. 1-Ethyl-1,4-dihydro-4-oxo-7-(4-pyridyl)quinoline-3-carboxylic acid.

Розоксацин

$C_{17}H_{14}N_2O_3$ = 294.3.
CAS — 40034-42-2.
ATC — J01MB01.
ATC Vet — QJ01MB01.



Adverse Effects and Precautions
As for Nalidixic Acid, p.304.

Dizziness, drowsiness, and visual disturbances occur relatively frequently, and patients should be advised not to drive or operate machinery if affected.

Uses and Administration
Rosoxacin is a 4-quinolone antibacterial with actions similar to those of nalidixic acid (p.304). It is active against *Neisseria gonorrhoeae* and has been given as single-dose oral treatment for gonorrhoea. It has also been used in the treatment of urinary-tract infections.