

**Proprietary Preparations** (details are given in Part 3)

**Arg.:** Fiorintia; **Austral.:** Levophed; **Belg.:** Levophed; Norepine†; **Braz.:** Levophed; Norephed†; **Canad.:** Levophed; **Chile:** Adine; **Ger.:** Arterenol; **Gr.:** Levophed; Noradren; **Hong Kong:** Levophed†; **India:** Adrenor; **Indon.:** Levophed; IN-Epi; Raivas; Vascon; **Irl.:** Levophed; **Israel:** Levophed; **Malaysia:** Levophed; **Mex.:** Pridam; **NZ:** Levophed; **Philipp.:** Inotop; Levophed; **Pol.:** Xylonor; **Singapore:** Levophed†; **Spain:** Norages; **Thai.:** Levophed; **USA:** Levophed.

Used as an adjunct in: **Austria:** Neo-Xylestine forte; Scandonest; **Braz.:** Xylestine; Xylocaina; **Ger.:** Xylestine-S†; Xylestine, Xylestine-F†; **Ital.:** Lident Andrenor†; Xylonor; **Port.:** Scandonest; Xilonibsa; **S.Afr.:** Xylotox; **Spain:** Xylonor Especial; **Switz.:** Scandonest; Xylestine-F†; Xylestine-S "special"†; **Thai.:** Neo-Lidocaton†.

**Norfenefrine Hydrochloride** (*rINN*) ⊗

Hydrocloruro de norfenefrina; Norfenefrin Hydrochlorür; Nor-fénéfrine, Chlorhydrate de; Norfenefrini Hydrochloridum; Norphenylephrine Hydrochloride; m-Norsynephrine Hydrochloride; WV-569. 2-Amino-1-(3-hydroxyphenyl)ethanol hydrochloride.

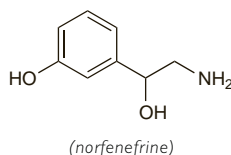
Норфенефрина Гидрохлорид

$C_8H_{11}NO_2 \cdot HCl = 189.6$ .

CAS — 536-21-0 (norfenefrine); 15308-34-6 (norfenefrine hydrochloride).

ATC — C01CA05.

ATC Vet — QC01CA05.



NOTE. *m*-Octopamine has been used as a synonym for norfenefrine. Care should be taken to avoid confusion with octopamine, which is the *p*-isomer.

**Profile**

Norfenefrine is a sympathomimetic (p.1407) with predominantly alpha-adrenergic activity. It is used as the hydrochloride for its vasopressor effect in the treatment of hypotensive states (p.1174). The usual oral dose is 15 mg three times daily of norfenefrine hydrochloride, as a modified-release preparation. Norfenefrine hydrochloride has also been given by injection.

**Preparations**

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**Austria:** Novadral; **Ger.:** Novadral†; **Mex.:** AS Cor; **Switz.:** Novadral; **Turk.:** Novadral.

**Multi-ingredient:** **Ger.:** Adyston†; Normotin-R†; Ordinal Forte†; **Switz.:** Ortho-Maren retard.

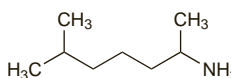
**Octodrine** (*USAN, rINN*) ⊗

Octodrina; Octodrinum; SKF-51. 1,5-Dimethylhexylamine.

ОКТОДРИН

$C_8H_{19}N = 129.2$ .

CAS — 543-82-8.

**Profile**

Octodrine is a sympathomimetic (p.1407) with mainly alpha-adrenergic activity. It has been given orally as the camsilate, in combination with norfenefrine (p.1361), in the treatment of hypotensive states. Octodrine phosphate has been used as an ingredient of preparations for obstructive airways disease.

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**Multi-ingredient:** **Austria:** Ambredin; **Ger.:** Ordinal Forte†.

**Olmesartan Medoxomil** (*BAN, USAN, rINN*)

CS-866; Olmésartan Médoxomil; Olmesartán medoxomilo; Olmesartanum Medoxomilum; RNH-6270 (olmesartan). (5-Methyl-2-oxo-1,3-dioxol-4-yl) methyl ester of 4-(1-Hydroxy-1-methylethyl)-2-propyl-1-[(2'-{(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl)methyl]-1H-imidazole-5-carboxylic acid.

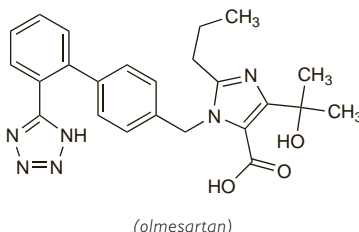
Ольмезартан Медоксомил

$C_{29}H_{30}N_6O_6 = 558.6$ .

CAS — 144689-24-7 (olmesartan); 144689-63-4 (olmesartan medoxomil).

ATC — C09CA08.

ATC Vet — QC09CA08.



NOTE. The name olmesartan has been applied to both the base and to the medoxomil ester.

**Adverse Effects and Precautions**

As for Losartan Potassium, p.1326.

**Interactions**

As for Losartan Potassium, p.1327.

**Pharmacokinetics**

Olmesartan medoxomil is an ester prodrug that is hydrolysed during absorption from the gastrointestinal tract to the active form olmesartan. The absolute bioavailability is about 26%. Peak plasma concentrations of olmesartan occur about 1 to 2 hours after oral doses. Olmesartan is at least 99% bound to plasma proteins. It is excreted in the urine and the bile as olmesartan; about 35 to 50% of the absorbed dose is excreted in the urine and the remainder in the bile. The terminal elimination half-life is between 10 and 15 hours.

## ◇ References.

- Yoshihara K, *et al.* Population pharmacokinetics of olmesartan following oral administration of its prodrug, olmesartan medoxomil: in healthy volunteers and hypertensive patients. *Clin Pharmacokinet* 2005; **44**: 1329–42.

**Uses and Administration**

Olmesartan is an angiotensin II receptor antagonist with actions similar to those of losartan (p.1327). It is used in the management of hypertension (p.1171).

Olmesartan is given orally as the ester prodrug olmesartan medoxomil. After a dose the hypotensive effect lasts for 24 hours. Most of the hypotensive effect is apparent within 2 weeks after starting therapy and is maximal within about 8 weeks.

In hypertension, olmesartan medoxomil is given in a usual dose of 20 mg once daily, although in the UK an initial dose of 10 mg once daily is recommended. The dose may be increased to 40 mg once daily if required.

For doses in hepatic or renal impairment, see below.

## ◇ References.

- Brunner HR. The new oral angiotensin II antagonist olmesartan medoxomil: a concise overview. *J Hum Hypertens* 2002; **16** (suppl 2): S13–S16.
- Warner GT, Jarvis B. Olmesartan medoxomil. *Drugs* 2002; **62**: 1345–53. Correction. *ibid.*; 1852.
- Gardner SF, Franks AM. Olmesartan medoxomil: the seventh angiotensin receptor antagonist. *Ann Pharmacother* 2003; **37**: 99–105.
- Unger T, *et al.* The role of olmesartan medoxomil in the management of hypertension. *Drugs* 2004; **64**: 2731–9.
- Mire DE, *et al.* A review of the structural and functional features of olmesartan medoxomil, an angiotensin receptor blocker. *J Cardiovasc Pharmacol* 2005; **46**: 585–93.
- Takai S, Miyazaki M. Effect of olmesartan medoxomil on atherosclerosis: clinical implications of the emerging evidence. *Am J Cardiovasc Drugs* 2006; **6**: 363–6.
- Smith DH. Dose-response characteristics of olmesartan medoxomil and other angiotensin receptor antagonists. *Am J Cardiovasc Drugs* 2007; **7**: 347–56.
- Zannad F, Fay R. Blood pressure-lowering efficacy of olmesartan relative to other angiotensin II receptor antagonists: an overview of randomized controlled studies. *Fundam Clin Pharmacol* 2007; **21**: 181–90.
- Chrysant SG, *et al.* Treatment of hypertension with olmesartan medoxomil, alone and in combination with a diuretic: an update. *J Hum Hypertens* 2007; **21**: 699–708.
- Barrios V, Escobar C. Olmesartan medoxomil plus hydrochlorothiazide for treating hypertension. *Expert Opin Pharmacother* 2008; **9**: 129–36.

**Administration in hepatic or renal impairment.** Olmesartan is excreted in both urine and bile and raised plasma concentrations have been noted in patients with renal or hepatic impairment. In patients with renal impairment, licensed product information in the UK does not recommend the use of olmesartan in severe impairment (creatinine clearance (CC) below 20 mL/minute) since experience is limited, and the maximum

dose in mild to moderate impairment (CC 20 to 60 mL/minute) is 20 mg once daily. Similarly, in patients with hepatic impairment, licensed product information in the UK does not recommend the use of olmesartan in severe impairment since there is no experience. Those with moderate hepatic impairment should be given an initial dose of 10 mg once daily and the maximum dose is 20 mg once daily.

**Migraine.** For reference to the use of angiotensin II receptor antagonists, including olmesartan, in the prophylaxis of migraine, see under Losartan, p.1328.

**Preparations**

**Proprietary Preparations** (details are given in Part 3)

**Arg.:** Olmec; Tensonit; Vasexten; **Austral.:** Olmetec; **Austria:** Olmetec; **Belg.:** Belsar; Olmetec; **Braz.:** Benicar; Olmetec; **Cz.:** Olmetec; Sarten; **Denm.:** Olmetec; **Fin.:** Benetor; Olmetec; **Fr.:** Alteis; Olmetec; **Ger.:** Olmetec; Votum; **Gr.:** Olartan; Olmetec; **Hong Kong:** Olmetec; **Indon.:** Olmetec; **Irl.:** Benetor; Omesar; **Israel:** Olmetec; **Ital.:** Olmetec; Olpress; Plauana; **Jpn.:** Olmetec; **Malaysia:** Olmetec; **Neth.:** Olmes; Olmetec; **Norw.:** Olmetec; **Philipp.:** Olmetec; **Port.:** Olmetec; Olars; **Singapore:** Olmetec; **Spain:** Ixia; Olmetec; Openvas; **Switz.:** Olmetec; Votum; **Thai.:** Olmetec; **UK:** Olmetec; **USA:** Benicar; **Venez.:** Benicar; Olmetec.

**Multi-ingredient:** **Austral.:** Olmetec Plus; **Belg.:** Olmetec Plus; **Braz.:** Benicar HCT; Olmetec HCT; **Cz.:** Olmetec Plus H; Sarten Plus H; **Fr.:** Al-teisduo; Coolmetec; Olmetec Plus; Votum Plus; **Gr.:** Olartan Plus; Olmetec Plus; **Malaysia:** Olmetec Plus; **Port.:** Olars Plus; **Singapore:** Olmetec Plus; **Switz.:** Olmetec Plus; Votum Plus; **UK:** Olmetec Plus; **USA:** Azor; Benicar HCT.

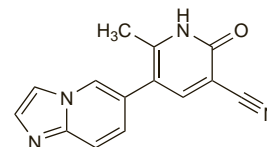
**Olprinone Hydrochloride** (*rINN*)

Hydrocloruro de olprinona; Olprinone, Chlorhydrate d'; Olprini Hydrochloridum. 1,2-Dihydro-5-imidazo[1,2-*a*]pyridin-6-yl-6-methyl-2-oxonicotinonitrile hydrochloride.

Ольпринона Гидрохлорид

$C_{14}H_{16}N_4O \cdot HCl = 286.7$ .

CAS — 106730-54-5 (olprinone); 119615-63-3 (olprinone hydrochloride).

**Profile**

Olprinone is a phosphodiesterase inhibitor with positive inotropic and vasodilator activity, used in acute heart failure (p.1165). It is given intravenously as the hydrochloride in an initial dose of 10 micrograms/kg given over 5 minutes, followed by a continuous infusion at a rate of 100 to 400 nanograms/kg per minute, according to response.

**Preparations**

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**Jpn.:** Coretec.

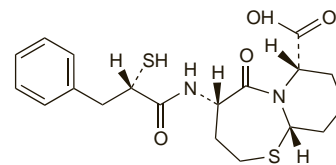
**Omapatrilat** (*BAN, USAN, rINN*)

BMS-186716; BMS-186716-01; Omapatrilate; Omapatrilato; Omapatrilatum. (4S,7S,10aS)-Octahydro-4-[(S)-α-mercaptohydrocinnamido]-5-oxo-7H-pyrido[2,1-b][1,3]thiazine-7-carboxylic acid.

Омапатрилат

$C_{19}H_{24}N_2O_4S_3 = 408.5$ .

CAS — 167305-00-2.

**Profile**

Omapatrilat is a vasopeptidase inhibitor. It inhibits both angiotensin-converting enzyme and neutral endopeptidase and is under investigation in the management of hypertension and heart failure. However, its use may be limited by severe angioedema.

## ◇ References.

- Tabrizchi R. Dual ACE and neutral endopeptidase inhibitors: novel therapy for patients with cardiovascular disorders. *Drugs* 2003; **63**: 2185–2202.
- Kostis JB, *et al.* Omapatrilat and enalapril in patients with hypertension: the Omapatrilat Cardiovascular Treatment vs. Enalapril (OCTAVE) trial. *Am J Hypertens* 2004; **17**: 103–11.