ing compounds that are more stable, have a longer duration of action, and a more specific effect. Applications include:

- softening and dilating the cervix and for uterine stimulation, e.g. dinoprost (prostaglandin F_2) (p.2006) and its analogue carboprost (p.2006); dinoprostone (prostaglandin E_2) (p.2007) and its analogue sulprostone (p.2018); and gemeprost (p.2010) and misoprostol (p.2013), analogues of prostaglandin E_1
- vasodilators and inhibitors of platelet aggregation, e.g. alprostadil (prostaglandin E_1) (p.2183) and its analogue limaprost (p.1325); and epoprostenol (prostacyclin) (p.1279) and its analogue iloprost (p.1313)
- inhibition of gastric acid secretion and protection of the gastrointestinal mucosa, e.g. misoprostol (p.2013)
- glaucoma treatment, e.g. bimatoprost (p.1878), latanoprost (p.1882), travoprost (p.1886), and unoprostone (p.1886)
- as luteolytics (causing regression of the corpus luteum in the ovary) in veterinary medicine, e.g. synthetic analogues of prostaglandin F_2 .

◊ References.

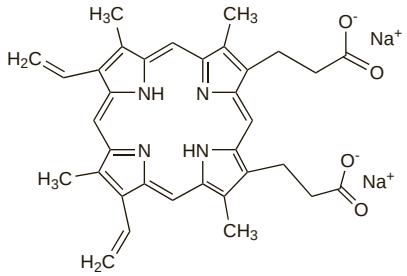
1. Moncada S, Vane JR. Arachidonic acid metabolites and the interactions between platelets and blood-vessel walls. *N Engl J Med* 1979; **300:** 1142–7.
2. Higgs GA, Vane JR. Inhibition of cyclo-oxygenase and lipoxygenase. *Br Med Bull* 1983; **39:** 265–70.
3. Halushka PV, *et al.* Thromboxane, prostaglandin and leukotriene receptors. *Annu Rev Pharmacol Toxicol* 1989; **29:** 213–39.
4. Smith WL, *et al.* Prostaglandin and thromboxane biosynthesis. *Pharmacol Ther* 1991; **49:** 153–79.
5. O'Neill C. The biochemistry of prostaglandins: a primer. *Aust N Z J Obstet Gynaecol* 1994; **34:** 332–7.
6. Wu KK. Molecular regulation and augmentation of prostacyclin biosynthesis. *Agents Actions Suppl* 1995; **45:** 11–17.

Protoporphyrin IX Disodium

Protoporfirina IX disódica; Protoporphyrin Disodium. Disodium 7,12-diethenyl-3,8,13,17-tetramethyl-21*H*,23*H*-porphine-2,18-dipropanoate.

$C_{34}H_{32}N_4Na_2O_4$ = 606.6.

CAS — 50865-01-5 (protoporphyrin IX disodium); 553-12-8 (protoporphyrin IX).



Profile

Protoporphyrin IX disodium has been given by mouth for the treatment of impaired hepatic function associated with gallstones and cholecystitis.

Proxazole Citrate *(USAN, rINNM)*

AF-634; Citrato de proxazol; Propaxoline Citrate; Proxazole, Citrate de; Proxazoli Citras; PZ-17105. *NN*-Diethyl-3-(1-phenylpropyl)-1,2,4-oxadiazole-5-ethanamine citrate.

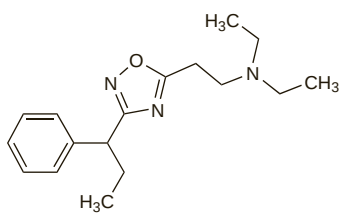
Проксазола Цитрат

$C_{17}H_{25}N_3O,C_6H_8O_7$ = 479.5.

CAS — 5696-09-3 (proxazole); 132-35-4 (proxazole citrate).

ATC — A03AX07.

ATC Vet — QA03AX07.



(proxazole)

Profile

Proxazole citrate has been used as an antispasmodic and in vascular disorders.

Preparations

Proprietary Preparations (details are given in Part 3)
Ital.: Toness†.

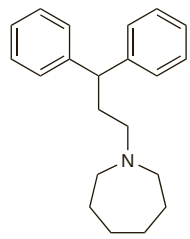
Prozapine Hydrochloride *(rINNM)*

Hexadiphane Hydrochloride; Hidrocloruro de prozapina; Prozapine, Chlorhydrate de; Prozapini Hydrochloridum. 1-(3,3-Diphenylpropyl)cyclohexamethyleneimine hydrochloride.

Прозапина Гидрохлорид

$C_{21}H_{27}N,HCl$ = 329.9.

CAS — 3426-08-2 (prozapine); 13657-24-4 (prozapine hydrochloride).



(prozapine)

Profile

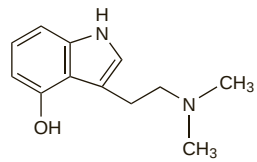
Prozapine hydrochloride is an antispasmodic that has been given orally with sorbitol in biliary and gastrointestinal disorders.

Psilocin

4-Hydroxy-*NN*-dimethyltryptamine; Psilocina; Psilocyn. 3-(2-Dimethylaminoethyl)indol-4-ol.

$C_{12}H_{16}N_2O$ = 204.3.

CAS — 520-53-6.



NOTE. The following terms have been used as 'street names' (see p.vi) or slang names for various forms of psilocin or mushrooms containing psilocin:
1UP's; Abhort; Aborts; Alice; Benzies; Blue Rimmers; Boom-Dads; Boomers; Caps; Crumb Tarts; Cubes; FireWorks; Fun Gus; Fun Guys; Fungus; God's flesh; Goombas; Gus; Jesus; Lalkas; Liberty caps; Little smoke; Magic mushroom; Magic Mushrooms; Marios; Mexican mushroom; Mexican mushrooms; Mucks; Muggers; Mush; Mushies; Mushrooms; Musk; Pizza Toppings; Shroomies; Shrooms; Silly putty; Simple Simon; Smurfhats; Toads; Umbrellas; Yellow Bentines; Zoomers; Zoomies.

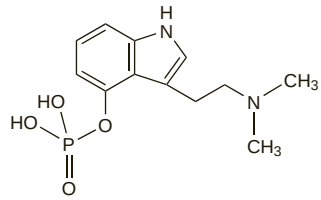
Psilocybine *(BAN, rINN)*

CY-39; 4-Phosphoryloxy-*NN*-dimethyltryptamine; Psilocibina; Psilocybin; Psilocybinum; Psilosybiini. 3-(2-Dimethylaminoethyl)indol-4-yl dihydrogen phosphate.

Псилоцибин

$C_{12}H_{17}N_2O_4P$ = 284.2.

CAS — 520-52-5.



NOTE. The following terms have been used as 'street names' (see p.vi) or slang names for various forms of psilocybine or mushrooms containing psilocybine:
1 UP's; Alice; Benzies; Blue caps; Blue Rimmers; Boom-Dads; Boomers; Booms; Buttons; Caps; Champ; Crumb Tarts; Cubes; FireWorks; Fun Gus; Fun Guys; Fungus; Funguys; God's flesh; Goombas; Gus; Hombrecitos; Jesus; Lalkas; Las mujercitas; Little smoke; Magic mushroom; Magic mushrooms; Marios; Mexican mushroom; Mexican mushrooms; Mucks; Muggers; Mush; Mushies; Mushroom soup; Mushroom tea; Mushrooms; Musk; Philosopher's Stones; Pizza toppings; Rooms; Sacre mushroom; Sacred mushroom; Sacred mushrooms; Shroomies; Shrooms; Silly putty; Simple Simon; Smurfhats; Teonanactl; Toads; Truffles; Umbrellas; Yellow Bentines; Zoomers; Zoomies.

Profile

Psilocin and psilocybine are indole alkaloids obtained from the sacred Mexican mushroom (teonanácatl), *Psilocybe mexicana* (Agaricaceae).

In the UK, psilocybine is present in the indigenous mushroom *Psilocybe semilanceata* (magic mushroom; liberty cap). Psilocybine is also present in other species of mushrooms including *Stropharia cubensis* and *Conocybe* spp.

Psilocybine has hallucinogenic and sympathomimetic properties similar to those of lysergide (p.2335). It is less potent than lysergide and its hallucinogenic effects last for up to 6 hours. There is evidence to suggest that psilocybine is converted to the active form psilocin in the body. It has no therapeutic use.

Pulegium Oil

Pennyroyal Oil; Poleo, aceite esencial de.

Profile

Pulegium oil is a volatile oil distilled from pennyroyal herb, *Mentha pulegium* (Labiatae), containing pulegone ($C_{10}H_{16}O$ = 152.2). It was formerly used as an emmenagogue. Severe toxic effects have followed its use as an abortifacient with convulsions, hepatotoxicity, and death. It is reported to have insect repellent activity.

Adverse effects. Severe hepatotoxicity accompanied by seizures occurred in 2 infants each of whom had received herbal teas containing pulegium oil.[1] In one of the infants multiple organ failure developed, and fulminant hepatic failure with hepatocellular necrosis and cerebral oedema proved fatal. A further 4 cases of toxicity associated with ingestion of pulegium oil have been reported;[2] three of the cases were adult patients who had ingested either herbal teas to induce menses (2 cases) or a herbal extract as an abortifacient (1 fatality), and the fourth was a 22-month old child who had ingested the oil.

1. Bakerink JA, *et al.* Multiple organ failure after ingestion of pennyroyal oil from herbal tea in two infants. *Pediatrics* 1996; **98:** 944–7.
2. Anderson IB, *et al.* Pennyroyal toxicity: measurement of toxic metabolite levels in two cases and review of the literature. *Ann Intern Med* 1996; **124:** 726–34.

Pulmonary Surfactants

Tensioactivos pulmonares.

Description. Pulmonary surfactants are mixtures consisting mainly of phospholipids and surfactant proteins that are used to replace deficient endogenous lung surfactants. A number of preparations have been studied including:

- natural human surfactant obtained from amniotic fluid or biosynthetic material
- natural animal-derived surfactants, which are bovine or porcine lung extracts that may be modified by the addition of synthetic surfactants, as in the case of beractant, or unmodified, as in the case of bovactant and calfactant
- synthetic or semisynthetic preparations, which may contain the phospholipid colfosceril palmitate, a major constituent of natural lung surfactants, in combination with other substances that aid spreading and absorption such as the synthetic peptide sinapultide.

Beractant *(BAN, USAN)*

A-60386X.

CAS — 108778-82-1.

Description. Beractant is a modified bovine lung extract containing mostly phospholipids, modified by the addition of colfosceril palmitate, palmitic acid, and tripalmitin.
The term Surfactant TA has been applied to a modified bovine lung surfactant.

Bovactant *(BAN)*

SF-R11.

Description. Bovactant is an extract of bovine lung containing about 92% of phospholipids, 3.2% of cholesterol, 0.6% of surfactant-associated hydrophobic proteins, and 0.4% of free fatty acid.

Calfactant *(BAN, USAN)*

CAS — 183325-78-2.

Description. Calfactant is an unmodified calf lung extract that includes mostly phospholipids and hydrophobic surfactant-specific proteins (SP-B and SP-C).