daily in 4 divided doses in children aged 1 month and over (neonates may be given 32 mg/kg daily in 4 divided doses); this should be continued until the patient is afebrile or for the first 14 days after the onset of symptoms. Once fever and signs of inflammatory disease resolve, the aspirin dose is reduced to 2 to 5 mg/kg daily (neonates may be given 5 mg/kg daily) as a single dose for its antiplatelet effect. Aspirin may be stopped 6 to 8 weeks after the onset of illness but is usually continued for at least one year if coronary abnormalities are present and is continued indefinitely if coronary aneurysms persist. Similar regimens[3,4] are used in the USA although the initial dose of aspirin is more usually 80 to 100 mg/kg daily.

Despite this widespread use the optimum dose and duration of treatment have not been clearly established, and the value of aspirin in the initial management of Kawasaki disease has been questioned. In a meta-analysis[5] fever duration was significantly shorter in those on high-dose aspirin; however, other studies[6] have not shown such a benefit. Meta-analyses[5,7] have also shown that the incidence of coronary artery abnormalities is not significantly different for regimens using high (over 80 mg/kg daily) or low doses of aspirin. Furthermore, a retrospective study[8] suggested that aspirin use (irrespective of dose) in the acute phase of the disease may be unnecessary as its addition to immunoglobulin treatment had no effect on the rate of coronary artery abnormalities. A more recent review[9] found that evidence from comparative studies failed to show that aspirin reduced the rate of coronary artery abnormalities; a lack of good quality randomised controlled trials prevented any recommendations on the use of aspirin in the treatment of Kawasaki disease.

1. Williams RV, *et al.* Pharmacological therapy for patients with Kawasaki disease. *Paediatr Drugs* 2001; **3:** 649–60.
2. Brogan PA, *et al.* Kawasaki disease: an evidence based approach to diagnosis, treatment, and proposals for future research. *Arch Dis Child* 2002; **86:** 286–90.
3. Newburger JW, *et al.* Diagnosis, treatment, and long-term management of Kawasaki disease: a statement for health professionals from the Committee on Rheumatic Fever, Endocarditis, and Kawasaki Disease, Council on Cardiovascular Disease in the Young, American Heart Association. *Pediatrics* 2004; **114:** 1708–33. Correction. *ibid.* 2005; **115:** 1118. Also available at: http://pediatrics.aappublications.org/cgi/reprint/114/6/1708.pdf (accessed 12/04/07) Also published in *Circulation* 2004; **110:** 2747–71. Also available at: http://circ.ahajournals.org/cgi/reprint/110/17/2747.pdf (accessed 12/04/07)
4. Freeman AF, Shulman ST. Kawasaki disease: summary of the American Heart Association guidelines. *Am Fam Physician* 2006; **74:** 1141–8.
5. Terai M, Shulman ST. Prevalence of coronary artery abnormalities in Kawasaki disease is highly dependent on gamma globulin dose but independent of salicylate dose. *J Pediatr* 1997; **131:** 888–93.
6. Saulsbury FT. Comparison of high-dose and low-dose aspirin plus intravenous immunoglobulin in the treatment of Kawasaki syndrome. *Clin Pediatr (Phila)* 2002; **41:** 597–601.
7. Durongpisitkul K, *et al.* The prevention of coronary artery aneurysm in Kawasaki disease: a meta-analysis on the efficacy of aspirin and immunoglobulin treatment. *Pediatrics* 1995; **96:** 1057–61.
8. Hsieh K-S, *et al.* Treatment of acute Kawasaki disease: aspirin's role in the febrile stage revisited. *Pediatrics* 2004; **114:** 689. Full version: http://pediatrics.aappublications.org/cgi/reprint/114/6/e689 (accessed 27/11/06)
9. Baumer JH, *et al.* Salicylate for the treatment of Kawasaki disease in children. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2006 (accessed 27/11/06).

Leg ulcers. A 4-month placebo-controlled study[1] in 20 patients suggested that aspirin 300 mg daily aided healing of chronic venous leg ulcers; the mechanism of action was unclear.[2] However, the validity of the findings has been challenged.[3] The management of leg ulcers is discussed on p.1585.

1. Layton AM, *et al.* Randomised trial of oral aspirin for chronic venous leg ulcers. *Lancet* 1994; **344:** 164–5.
2. Ibbotson SH, *et al.* The effect of aspirin on haemostatic activity in the treatment of chronic venous leg ulceration. *Br J Dermatol* 1995; **132:** 422–6.
3. Ruckley CV, Prescott RJ. Treatment of chronic leg ulcers. *Lancet* 1994; **344:** 1512–13.

Malignant neoplasms. For references to studies suggesting that regular use of aspirin and other NSAIDs may reduce the risk of developing malignant neoplasms of the gastrointestinal tract, see under NSAIDs, p.100.

Myeloproliferative disorders. Aspirin in low doses may be used to provide symptomatic relief for erythromelalgia (burning pain and erythema of the hands and feet) in patients with polycythaemia vera (p.654) and primary thrombocythaemia (p.654).

Pain. Aspirin, along with other NSAIDs and paracetamol, may be used for treating mild or moderate pain (see Choice of Analgesic, p.2) and is also used in moderate or severe pain to potentiate the effects of opioids. It is suitable for use in acute or chronic pain. Aspirin should not be used for pain relief in children because of its association with Reye's syndrome (see under Adverse Effects, above).

Dependence and tolerance are not a problem with non-opioid analgesics such as aspirin, but there is a ceiling of efficacy, above which increasing the dose has no further therapeutic effect.

References.

1. Edwards JE, *et al.* Single dose oral aspirin for acute pain. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 1999 (accessed 27/11/06).
2. Hersch EV, *et al.* Over-the-counter analgesics and antipyretics: a critical assessment. *Clin Ther* 2000; **22:** 500–48.
3. Vergne P, *et al.* Aspirine, douleurs et inflammation. *Rev Med Interne* 2000; **21** (Suppl 1): 89s–96s.

Rheumatic disorders. Aspirin was once widely used in the treatment of rheumatoid arthritis (p.11) but has been superseded by better tolerated NSAIDs; however, juvenile idiopathic arthritis including Still's disease (p.10) are among the limited number of indications for aspirin use in children. The *American Hospital Service Formulary* suggests that children weighing 25 kg or less may be given an initial oral dose of 60 to 130 mg/kg daily in divided doses; heavier children should be started on 2.4 to 3.6 g daily. The usual maintenance dose is 80 to 100 mg/kg daily although up to 130 mg/kg daily may be required in some children; however, because of the risk of toxicity, it is recommended that children weighing over 25 kg should not receive doses of 100 mg/kg daily or above.

Preparations

BP 2008: Aspirin and Caffeine Tablets; Aspirin Tablets; Co-codaprin Tablets; Dispersible Aspirin Tablets; Dispersible Co-codaprin Tablets; Effervescent Soluble Aspirin Tablets; Gastro-resistant Aspirin Tablets;

USP 31: Acetaminophen and Aspirin Tablets; Acetaminophen, Aspirin, and Caffeine Tablets; Aspirin and Codeine Phosphate Tablets; Aspirin Capsules; Aspirin Delayed-release Capsules; Aspirin Delayed-release Tablets; Aspirin Effervescent Tablets for Oral Solution; Aspirin Extended-release Tablets; Aspirin Suppositories; Aspirin Tablets; Aspirin, Alumina, and Magnesia Tablets; Aspirin, Alumina, and Magnesium Oxide Tablets; Buffered Aspirin Tablets; Butalbital and Aspirin Tablets; Butalbital, Aspirin, and Caffeine Capsules; Butalbital, Aspirin, and Caffeine Tablets; Butalbital, Aspirin, Caffeine, and Codeine Phosphate Capsules; Carisoprodol and Aspirin Tablets; Carisoprodol, Aspirin, and Codeine Phosphate Tablets; Oxycodone and Aspirin Tablets; Pentazocine and Aspirin Tablets; Propoxyphene Hydrochloride, Aspirin, and Caffeine Capsules; Propoxyphene Napsylate and Aspirin Tablets.

Proprietary Preparations (details are given in Part 3)

Arg.: Adiro†; Aspimed†; Aspirina; Aspirinetas; Ball†; Bayaspirina; Bufferin†; Cardioaspirina; Desenfriolito; Ecotrin; Geniol AP†; Geniol Prevencion; Geniol SC sin Cafeina; Geniolito†; Lacefal†; Lafeaspirina; Nuevapina; ***Austral.:*** Aspro; Astrix; Bex†; Cardiprin; Cartia; Disprin; Disprin Direct; Ecotrin†; Solprin; Spren†; Vincent's Powders†; ***Austria:*** Acekapton; Aspiricor; Aspro; ASS; Herz ASS; Herzschutz ASS; Salimont; Thrombo ASS; Thrombostad; Togal Mono; ***Belg.:*** Acenterine; Asaflow; Asarid†; Aspirine; Aspro; Cardioaspirine; Cardiphar; Dispril; Sedergine; Therasa†; ***Braz.:*** AAS; Aasedatil†; Aceticil; Analgesin; Antifebrin†; Ascedor†; Asetisin†; Aspirina; Bufferin; Caas†; Cardio AAS; Cimaas; Ecasil†; Hipotermal; Salicil; Salicin; Salitil; Somalgin; ***Canad.:*** Asaphen; Aspergum; Aspirin with Stomach Guard; Bufferin; Entrophen; Equate; Novasen; Rivasa; Tri-Buffered ASA; ***Chile:*** Aspirina; Cardioaspirina; Disgren; Ecotrin; Fluicor; Hassapirin Puro; Thrombo AS; ***Cz.:*** Acylpyrin; Anopyrin; Apo-Asa†; Aspro†; Godasal; Upsarin†; ***Denm.:*** Hjerdyl; Hjertemagnyl; Idotyl; Magnyl; ***Fin.:*** Aspirin Cardio; Aspirin Zipp; Disperin; Primaspan; ***Fr.:*** Aspirine; Aspirine pH8†; Aspirisucre; Aspro; Catalgine†; Claragine; ***Ger.:*** Acesal; Acetylin†; Aspro; ASS; Godamed; HerzASS; Miniasal; Santasal N; Thomapyrin akut†; Togal ASS; ***Gr.:*** Salospir; Upsalgin-N; ***Hong Kong:*** Aspilets; Astrix; Bokey; Cardiprin; Cartia; Disprin; Ecotrin; Glyprin; LAsprin; Propirin; ***Hung.:*** Aspirin Protect; Astrix; Colfarit; Istopirin†; Kalmopyrin; ***India:*** ASA; Aspicot; Colsprin; CV-Sprin; Delisprin; Disprin; Ecosprin; ***Indon.:*** Aptor; Ascardia; Aspilets; Astika; Bodrexin; Cardio Aspirin; Contrexyn; Farmasal; Inzana; Minigrip; Naspro; Procardin; Restor; Rheumapill; Thrombo Aspilets; ***Irl.:*** Aspro; Caprin; Disprin; Lowasa; Nu-Seals; Resprin; ***Israel:*** Acetosal; Alka-Seltzer; Ascriptin†; Buffered Pirin; Cartia; Ecoprin; Godamed; Micropirin; Tevapirin; ***Ital.:*** Acesal†; ASA-ratio; Ascriptin; Aspiglicina; Aspirina; Aspirina 03; Aspirinetta; Aspro; Bufferin†; Cardioaspirin; Cemirit; Kilios†; ***Malaysia:*** Aceprin; Bufferin Low Dose†; Cardiprin; Casprin; Disprin; Dusil†; Glyprin; ***Mex.:*** Acetil-A; Acetin; Acitab; Adiro†; Antacsal; ASA; Ascriptin; Aspirina Protect; Axal†; Disprina; Doloquim; Ecotrin; Midolen; Vastecel; ***Neth.:*** Asacard; Aspirine Protect; Aspro; Bisolgripin†; Darosal; Togal; ***Norw.:*** Albyl-E; Dispril; Globoid; ***NZ:*** Aspec; Aspro; Cardiprin†; Cartia; Disprin; Ecotrin; Solprin; ***Philipp.:*** Anthrom; Asaprin; Aspec; Aspilets; Cor-30, Cor-80; Cortal; Enteroprin; Tromcor; ***Pol.:*** Acard; Acesan; Alka-Prim; Alka-Seltzer; ASA; Aspimag; Aspirin Protect; Asprocard; Asprocol; Bestpirin; Calcipiryna; Cardiofil; Encopirin; Galocard; Nipas; Polocard; Polopiryna; Polopiryna S; Proficar; Upsarin; ***Port.:*** AAS; Asacard; ASP; Aspirina; Aspro†; Cartia; Melhoral Infantil†; Migraspirina; Salycilina†; Toldex; Tromalyt; ***Rus.:*** Aspinat Cardio (Аспинат Кардио); Aspirin Cardio (Аспирин Кардио); CardiASK (КардиАСК); Thrombo ASS (Тромбо АСС); ***S.Afr.:*** Disprin; Ecotrin; Myoprin; ***Singapore:*** Aspro; Astrix†; Bokey; Bufferin†; Cardiprin; Disprin; Dusil; Glyprin; ***Spain:*** AAS; Adiro; Aspinfantil†; Aspirina; Bioplak; Helver Sal†; Mejoral†; Okal; Orravina†; Rhonal; Saspryl†; Sedergine; Tromalyt; ***Swed.:*** Albyl minor; Bamycor†; Bamyl; Bamyl S; Emotpin†; Magnecyl; Trombyl; ***Switz.:*** ASA; Asperivo†; Aspirine Cardio; Aspro; ASS; Juridin; Thrombace Neo; Tiatral 100 SR; Togal ASS; ***Thai.:*** Actorin; Anassa; Asatab; Ascot†; Aspent; Aspilets; Asrina; Caparin; Cardiprin; Comoprin†; Entrarin; Seferin; V-AS; ***Turk.:*** Algo; Algo Bebe; Asabrin; Asinpirine; Aspapirine; Aspinal; Ataspin; Babyprin; Coraspin; Dispril; Ecopirin; Notras; Opon; ***UAE:*** Jusprin; ***UK:*** Alka; Angettes; Aspro; Caprin; Disprin; Disprin Direct; Enprin; Micropirin; Nu-Seals; PostMI†; Pure Health; ***USA:*** Adprin-B; Arthritis Pain Formula; Ascriptin; Aspergum; Asprimox†; Bayer Low Adult Strength; Bufferin; Buffex; Cama Arthritis Pain Reliever; Easprin; Ecotrin; Empirin; Extra Strength Bayer Plus; Genprin; Halfprin; Magnaprin†; Norwich Extra Strength; Norwich Regular Strength; Regular Strength Bayer; St. Joseph Adult Chewable; ZORprin; ***Venez.:*** Asaprol; Ascriptin; Aspiretina†; Azacard; Cardipirina; Coraspirina.

Multi-ingredient: numerous preparations are listed in Part 3.

Auranofin *(BAN, USAN, rINN)*

Auranofiini; Auranofina; Auranofine; Auranofinum; Oranofin; SKF-39162; SKF-D-39162. (1-Thio-β-D-glucopyranosato)(triethylphosphine)gold 2,3,4,6-tetra-acetate.

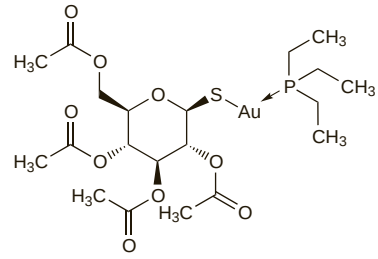
Ауранофин

$C_{20}H_{34}AuO_9PS$ = 678.5.

CAS — 34031-32-8.

ATC — M01CB03.

ATC Vet — QM01CB03.



Adverse Effects and Treatment

The most common adverse effects of auranofin involve the gastrointestinal tract and include nausea, abdominal pain, and sometimes vomiting, but most often diarrhoea, which can affect up to 50% of patients and may be severe enough to cause patients to withdraw from treatment. Other adverse effects are similar to those experienced with sodium aurothiomalate (p.122), although they appear to be less troublesome since fewer patients stop treatment with auranofin than with injectable gold. As with other gold salts, treatment of adverse effects is generally symptomatic (see p.123). Modifying the diet to increase bulk, use of a bulking agent such as bran, or a temporary reduction in auranofin dosage, may help the diarrhoea (but see Effects on the Gastrointestinal Tract, below).

◊ Reviews.

1. Tozman ECS, Gottlieb NL. Adverse reactions with oral and parenteral gold preparations. *Med Toxicol* 1987; **2:** 177–89.

Effects on the gastrointestinal tract. Diarrhoea and abdominal pain are common with auranofin. The mechanism of gastrointestinal toxicity has not been established but may be associated with a reversible defect in intestinal permeability.[1] Although some have suggested that diarrhoea may occur in up to 50% of patients taking auranofin, a study in 269 patients given the drug for rheumatoid arthritis found that only about 15% experienced loose and watery stools over a six-month period.[2] Although bulking agents have been recommended in the management of auranofin-induced diarrhoea, no overall difference in incidence was seen between patients given prophylactic psyllium and those given placebo; however, patients given psyllium had slightly fewer days with loose and watery stools.

Gold-induced colitis has also been reported in patients taking auranofin.[3,4]

1. Behrens R, *et al.* Investigation of auranofin-induced diarrhoea. *Gut* 1986; **27:** 59–65.
2. van Beusekom HJ, *et al.* The moderate intestinal side effects of auranofin do not require prophylactic therapy with a bulkforming agent. Dutch Ridaura Study Group. *Clin Rheumatol* 1997; **16:** 471–6.
3. Michet CJ, *et al.* Auranofin-associated colitis and eosinophilia. *Mayo Clin Proc* 1987; **62:** 142–4.
4. Langer HE, *et al.* Gold colitis induced by auranofin treatment of rheumatoid arthritis: case report and review of the literature. *Ann Rheum Dis* 1987; **46:** 787–92.

Effects on the kidneys. In a retrospective review[1] of 1283 patients who had received auranofin for treatment of rheumatoid arthritis 41 (3.2%) were found to have developed proteinuria. In most cases proteinuria was treated by stopping auranofin therapy. Long-term follow-up of 36 patients indicated that proteinuria had resolved in 31 within 2 years and in 29 within 1 year. Seven of 8 patients later rechallenged with auranofin had no relapses. In a further review of 2 comparative double-blind studies using gold compounds in the treatment of rheumatoid arthritis, proteinuria was found to have developed in 27% (23 of 85) of patients treated with sodium aurothiomalate, in 17% (42 of 247) of those treated with auranofin, and in 17% (36 of 210) of those receiving placebo. All patients were receiving NSAIDs.

1. Katz WA, *et al.* Proteinuria in gold-treated rheumatoid arthritis. *Ann Intern Med* 1984; **101:** 176–9.

Precautions

As for Sodium Aurothiomalate, p.123. Urine and blood tests should be carried out before starting au-

ranofin and monthly thereafter; licensed product information advises that auranofin should be withdrawn if the platelet count falls below 100 000 cells/mm^3 or if signs and symptoms suggestive of thrombocytopenia, leucopenia or aplastic anaemia occur. US licensed product information states that baseline renal and liver function levels should also be established before starting auranofin therapy. Auranofin should be used with caution in patients with inflammatory bowel disease.

Porphyria. Auranofin has been associated with acute attacks of porphyria and is considered unsafe in porphyric patients.

Interactions
As for Sodium Aurothiomalate, p.123.

Pharmacokinetics
Auranofin is incompletely absorbed from the gastrointestinal tract, only about 25% of the gold being absorbed. Gold from auranofin is bound to plasma proteins as well as to red blood cells. After 2 to 3 months of treatment the steady-state concentration of gold in the blood is reported to be about 0.7 micrograms/mL. The average terminal plasma half-life of gold at steady state is about 26 days while the biological half-life is 80 days. Tissue retention and total gold accumulation in the body are less than with intramuscular gold. Gold from auranofin penetrates into synovial fluid.

Most of a dose of auranofin appears in the faeces due to its poor absorption. About 60% of the absorbed gold from auranofin is excreted in the urine and the remainder in the faeces.

◊ Reviews.

1. Blocka KLN, *et al*. Clinical pharmacokinetics of oral and injectable gold compounds. *Clin Pharmacokinet* 1986; **11:** 133–43.
2. Benn HP, *et al.* Pharmacokinetics of auranofin: a single dose study in man. *J Rheumatol* 1990; **17:** 466–8.

Uses and Administration
Auranofin is a gold compound with a gold content of about 29%; it has similar actions and uses to those of sodium aurothiomalate (p.123). It is given orally in active progressive rheumatoid arthritis (below); such oral treatment is less toxic than intramuscular gold but is also much less effective. The usual initial dose of auranofin is 6 mg daily given in two divided doses at first, then, if tolerated, as a single dose. Treatment should be continued for at least 6 months to assess the response; the dose may be increased after 6 months, if the response is inadequate, to 3 mg three times daily. If the response is still inadequate after 3 months at this dosage, then treatment should be stopped.

Asthma. A systematic review[1] found that oral or parenteral gold compounds reduced corticosteroid requirements in the management of asthma (p.1108); however, it was considered that the effect was probably of limited clinical significance and, given the adverse effects and monitoring requirements of gold compounds, their use in asthma could not be recommended.

1. Evans DJ, *et al*. Gold as an oral corticosteroid sparing agent in stable asthma. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2000 (accessed 25/10/06).

Lupus. Since the introduction of less toxic drugs gold compounds are now rarely used in the treatment of SLE, however, there have been anecdotal reports suggesting that auranofin may still be of use in patients with discoid lupus erythematosus[1] or cutaneous lupus erythematosus[2] refractory to conventional treatment.

1. Dalziel K, *et al*. Treatment of chronic discoid lupus erythematosus with an oral gold compound (auranofin). *Br J Dermatol* 1986; **115:** 211–16.
2. Farrell AM, Bunker CB. Oral gold therapy in cutaneous lupus erythematosus (revisited). *Br J Dermatol* 1996; **135** (suppl 47): 41.

Pemphigus. A patient with long-standing pemphigus foliaceus being treated with prednisolone and hydroxychloroquine had healing of his lesions within 6 months of auranofin being substituted for the hydroxychloroquine.[1]

1. Bagheri MM, *et al*. Pemphigus foliaceus presenting as eruptive seborrheic keratosis and responding to oral gold treatment. *J Drugs Dermatol* 2002; **1:**333–4.

Psoriasis. Although topical auranofin has been shown in a placebo-controlled study[1] to be effective in the treatment of plaque-type psoriasis (p.1583) the high incidence of adverse skin reactions, such as contact dermatitis, was thought to outweigh any benefit.

1. Helm KF, *et al*. Topical auranofin ointment for the treatment of plaque psoriasis. *J Am Acad Dermatol* 1995; **33:** 517–19.

Rheumatic disorders. Gold compounds are among the disease-modifying antirheumatic drugs (DMARDs) that may be used in the treatment of rheumatoid arthritis (p.11). Oral gold is less toxic than intramuscular gold but is also much less effective. Gold compounds may also be of benefit in psoriatic arthritis (see under Spondyloarthropathies, p.13) and have been used in juvenile idiopathic arthritis (p.10).

References.

1. Suarez-Almazor ME, *et al.* Auranofin versus placebo in rheumatoid arthritis. Available in The Cochrane Database of Systematic Reviews; Issue 2. Chichester: John Wiley; 2000 (accessed 09/05/05).

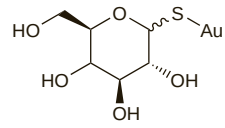
Preparations
Proprietary Preparations (details are given in Part 3)
Austral.: Ridaura; ***Austria:*** Ridaura; ***Belg.:*** Ridaura; ***Braz.:*** Ridaura†; ***Canad.:*** Ridaura†; ***Denm.:*** Ridaura†; ***Fin.:*** Ridaura; ***Fr.:*** Ridauran; ***Ger.:*** Ridaura; ***Gr.:*** Ridaura; ***Hong Kong:*** Ridaura; ***India:*** Goldar; ***Irl.:*** Ridaura; ***Israel:*** Ridaura; ***Ital.:*** Ridaura; ***Neth.:*** Ridaura; ***Norw.:*** Ridaura; ***NZ:*** Ridaura; ***Port.:*** Ridaura; ***Rus.:*** Auropan (Ауропан); ***S.Afr.:*** Ridaura; ***Spain:*** Ridaura; ***Swed.:*** Ridaura†; ***Switz.:*** Ridaura; ***UK:*** Ridaura; ***USA:*** Ridaura.

Aurothioglucose

1-Aurothio-D-glucopyranose; Aurotioglucosa; (D-Glucosylthio)-gold; Gold Thioglucose. (1-Thio-D-glucopyranosato)gold.

Ауротиоглюкоза

$C_6H_{11}AuO_5S$ = 392.2.
CAS — 12192-57-3.
ATC — M01CB04.
ATC Vet — QM01CB04.



Pharmacopoeias. In *US.*
USP 31 (Aurothioglucose). A yellow odourless or practically odourless powder. An aqueous solution is unstable on long standing. It is stabilised by the addition of a small amount of sodium acetate. pH of a 1% solution in water is about 6.3. Freely soluble in water; practically insoluble in alcohol, in acetone, in chloroform, and in ether. Store in airtight containers. Protect from light.

Adverse Effects, Treatment, and Precautions
As for Sodium Aurothiomalate, p.122.

Effects on the blood. Thrombocytopenia developed in 2 patients treated with intramuscular aurothioglucose.[1]

1. Levin M-D, *et al*. Two patients with acute thrombocytopenia following gold administration and five-year follow-up. *Neth J Med* 2003; **61:** 223–5.

Interactions
As for Sodium Aurothiomalate, p.123.

Pharmacokinetics
As for Sodium Aurothiomalate, p.123; absorption is slower and more irregular.

Uses and Administration
Aurothioglucose is a gold compound with a gold content of about 50%; it has similar actions and uses to those of sodium aurothiomalate (p.123). It is used in the treatment of active rheumatoid arthritis (p.11) and juvenile idiopathic arthritis (p.10). Aurothioglucose is given intramuscularly as a suspension in oil in an initial weekly dose of 10 mg increasing gradually to up to 50 mg weekly. Therapy is continued at weekly intervals until a total dose of 0.8 to 1 g has been given; if improvement has occurred with no signs of toxicity 50 mg may then be given at intervals of 3 to 4 weeks. Children aged 6 to 12 years have been given one-quarter the adult dose, to a maximum of 25 mg per dose.

◊ For comment on the relative efficacy and tolerability of aurothioglucose and aurothiomalate see Rheumatic Disorders, under Sodium Aurothiomalate, p.124.

Preparations
USP 31: Aurothioglucose Injectable Suspension.

Proprietary Preparations (details are given in Part 3)
Canad.: Solganal†; ***Israel:*** Solganal; ***Neth.:*** Auromyose†; ***USA:*** Solganal.

Aurotioprol

Sodium 3-aurothio-2-hydroxypropane-1-sulphonate.

Ауротиопрол

$C_3H_6AuNaO_4S_2$ = 390.2.
CAS — 27279-43-2.
ATC — M01CB05.
ATC Vet — QM01CB05.

Profile
Aurotioprol is a gold compound with a gold content of about 50%; it has similar actions and uses to those of sodium aurothiomalate (p.122). It is given by intramuscular injection for the treatment of rheumatoid arthritis (p.11). The initial dose is 25 mg weekly, increased to 50 to 100 mg weekly, until a total dose of 1.2 to 1.5 g has been given. If improvement has occurred with no signs of toxicity, this may be followed by a dose of 50 to 100 mg intramuscularly every month.

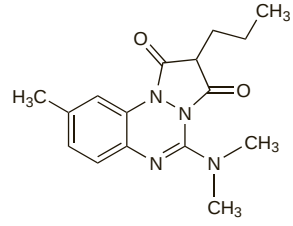
Preparations
Proprietary Preparations (details are given in Part 3)
Belg.: Allochrysine†; ***Fr.:*** Allochrysine.

Azapropazone *(BAN, rINN)*

AHR-3018; Apazone *(USAN)*; Atsapropatsoni; Azapropazon; Azapropazona; Azapropazonum; Mi85; NSC-102824. 5-Dimethylamino-9-methyl-2-propylpyrazolo[1,2-*a*][1,2,4]benzotriazine-1,3(2*H*)-dione.

Азапропазон

$C_{16}H_{20}N_4O_2$ = 300.4.
CAS — 13539-59-8.
ATC — M01AX04.
ATC Vet — QM01AX04.



Pharmacopoeias. *Br.* includes the dihydrate.
BP 2008 (Azapropazone). The dihydrate is a white to pale yellow crystalline powder. Very slightly soluble in water and in chloroform; soluble in alcohol; dissolves in solutions of alkali hydroxides.

Profile
Azapropazone is an NSAID (see p.96), structurally related to phenylbutazone (p.117). It also has uricosuric properties. Because azapropazone appears to be associated with a higher incidence of adverse effects than with some other NSAIDs, its use has been restricted to the treatment of rheumatoid arthritis, ankylosing spondylitis, and acute gout in patients for whom other NSAIDs have been ineffective.

Azapropazone is used as the dihydrate and doses are expressed in terms of this hydrated form. For the treatment of rheumatoid arthritis or ankylosing spondylitis the usual oral dose was up to 1.2 g daily in 2 divided doses. Patients *over 60 years of age* have been given 300 mg twice daily. Reduced doses were also recommended in patients with renal impairment, see below.

Administration in renal impairment. In the treatment of *rheumatoid arthritis* or *ankylosing spondylitis* in patients with reduced renal function the usual dose was reduced according to creatinine clearance (CC) as follows:

- CC 50 to 75 mL/minute: reduce usual dose (see above) by one-third to one-half
- CC less than 50 mL/minute: reduce usual dose by one-half to two-thirds

Breast feeding. Small quantities of azapropazone are excreted into breast milk.[1] However, the American Academy of Pediatrics[2] states that there have been no reports of any clinical effect on the infant associated with the use of azapropazone by breast-feeding mothers, and that therefore it may be considered to be usually compatible with breast feeding.

1. Bald R, *et al*. Excretion of azapropazone in human breast milk. *Eur J Clin Pharmacol* 1990; **39:** 271–3.
2. American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108:** 776–89. Correction. *ibid.*; 1029. Also available at: http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776 (accessed 01/11/07)

Effects on the blood. Auto-immune haemolytic anaemia, occasionally fatal, often with pulmonary infiltration, allergic alveolitis, pulmonary fibrosis, or fibrosing alveolitis, has been reported in patients receiving azapropazone.[1-3]

1. Chan-Lam D, *et al*. Red cell antibodies and autoimmune haemolysis after treatment with azapropazone. *BMJ* 1986; **293:** 1474.