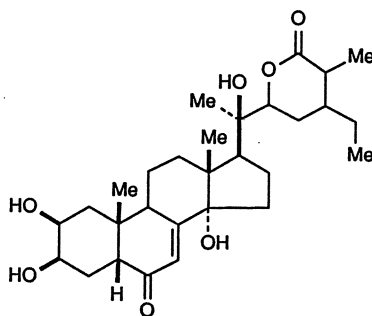


Cyasterone (2-13): R = H
Sengosterone (2-14): R = OH



Capitasterone (2-12)

2.3 Pharmacology

The decoction of the root of *A. bidentata* markedly increased blood flow in rat hind limbs and had a vasodilatory effect. It also reduced the inflammation in rat paws that was induced by egg white. When administered to mice the decoction exhibited an analgesic action. In rabbits, i.v. injection of the aqueous extract elicited a prompt reduction in blood pressure. The hypotensive effect was reversible [18].

The mixture of saponins isolated from the seeds of *A. aspera* increased the force of contraction of hearts isolated from frog, guinea pig, and rabbit. At lower doses, the stimulating effect could be blocked by pronethalol and partly by mepyramine. At higher saponin doses, the effect was not blocked by pronethalol. The saponins also increased the tonus of the hypodynamic heart and the force of contraction of failing papillary muscle [19]. Perfusion of isolated rat heart with adrenaline or the saponins obtained from *A. aspera* increased the activity of phosphorylase A but had no effect on total phosphorylase activity [20].

The saponins isolated from the fresh root of *A. longifolia* by extraction with butanol had a contraceptive action and induced early abortion in pregnant mice [21]. The benzene extract fraction of the plant *A. aspera* showed a 100% abortive activity in the rabbit at a single dose of 50 mg/kg. It was reported to be neither estrogenic nor antiestrogenic nor androgenic in mice. Abortion was apparently not due to a deficiency in prolactin, growth hormone, or pituitary gonadotropins. The drug was nontoxic and nonteratogenic [21]. A contraceptive activity in adult female rats was also observed with a fraction of a butanol extract of the aerial part of *A. aspera* when administered orally at 75 mg/kg on days 1–5 post coitum. It was, however, not observed in hamsters even at a dose of more than 300 mg/kg. Interestingly, the butanol extract exhibited potent estrogenic activity at the contraceptive dosage level. A significant uterotopic effect was apparent even at only 5% of the contraceptive dose [22].

The pharmacology of ecdysterone and inokosterone in vertebrates was also investigated. Ecdysterone and inokosterone, applied at doses of 0.1–10 mg/kg i.p. or 1–100 mg/kg orally, did not affect respiratory, circulatory, or autonomic nervous systems or blood sugar levels. It had no antiinflammatory or muscle relaxant effects nor did it accelerate wound healing in rabbits, rats, or guinea pigs [23]. No anabolic,