

**Abstract:**

The four-toed elephant shrew is the only extant member of the genus *Petrodromus*. Some features of its placentation are found in other elephant shrews and may be important in consolidating the elephant shrews in the order Macroscelidea. These include implantation in an embryo chamber at the caudal end of the uterine horn; a large yolk sac; a large, lobulated allantoic sac; a distinct layer of proliferative trophoblastic cells between the labyrinthine and spongy zones of the placenta; an accessory epitheliochorial placenta; and the formation of a mesoplacenta by the decidua basalis. Of particular note are the large granulated cells that occupy the walls of decidual, myometrial and mesometrial arteries. They appear to be uterine natural killer cells. The persistence of a relatively large yolk sac and a large lobulated allantoic sac is a feature which *Petrodromus* and other elephant shrews share with other members of the superordinal clade Afrotheria.