Placentation in the degu (Octodon degus): Analogies with extrasubplacental trophoblast and human extravillous trophoblast

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This study examined the placentation in the degu, the origin of the extrasubplacental trophoblast (EST) (extravillous trophoblast in human), and the activity of Na+/K+ ATPase in the placental barrier during different gestational ages, as part of a wider effort to understand the reproductive biology of this species. Fifteen degus at the first stage of gestation, midgestation and at term of pregnancy were studied. At day 27 of gestation, the subplacenta is formed under the wall of the central excavation. Simultaneously, the outermost trophoblast of the ectoplacental cone differentiated into secondary trophoblast giant cells that lie on the outside of the placenta, forming an interface with the maternal cells in the decidua. These giant cells immunostained positive for cytokeratin (CK) and placental lactogen (hPL) until term. During this period, the EST merged from the subplacenta to the decidua and immunostained negative for CK, but at term, immunostained for CK and hPL in the maternal v