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Changes in endometrial arylamidase during implantation in the guinea pig

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The uterine distribution of amino acid arylamidase was determined histochemically on day 7 pc and enzyme activity at vs. between implantation sites compared. Activity was assessed in cryostat sections using L-leucine-4-methoxy-B-naphtylamide as substrate coupled with Fast Blue B. Implantation sites were indicated by the Pontamine blue response and confirmed by examination of alternate H & E stained sections. Throughout the uterus, acitivity was virtually absent in the myometrium and luminal-glandular epithelium. Between sites, activity was concentrated in vessel walls and abundant and uniformly distributed in the stroma. In contrast at implantation sites a marked reduction of activity was apparent in the decidualizing stroma surrounding blastocysts. The results indicate that the uterine distribution of arylamidase differs in the guinea pig and rabbit being stromal vs. epithelial, respectively. Such a difference may correlate with interstitial vs. centric modes of implantation. (Supported by Deutsche Forschungsgemeinschaft Grant De 181/9-4; *Alexander von Humboldt Fellow)

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