

# Renal function in the chronically cannulated fetal llama: Comparison with studies in the ovine fetus

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Samples of maternal and fetal plasma, fetal urine, and amniotic fluid were collected from 8 chronically cannulated pregnant llamas, in the last third of gestation. The samples were obtained for up to 18 days post-surgery. Osmolality, sodium (Na), potassium (K), chloride (Cl), and urea were measured on 40 samples collected on days 1, 2, 3, 4-5, 6-7, 8-9, and 10-19. The osmolalities of maternal and fetal plasma, fetal urine and amniotic fluid, averaged over these 7 time periods, were, respectively,  $312 \pm 2$ ,  $311 \pm 1$ ,  $484 \pm 14$ , and  $317 \pm 1$  mosmol kg<sup>-1</sup>. Values are given as mean  $\pm$  s.e. The major differences from fetal fluid values in the ovine fetus (from previously published values) were the higher osmolality and urea concentration of llama fetal urine. Urine flow rate measured in 6 fetuses, 4 -5-6 -5 kg body weight, was  $5.8 \pm 0.4$  mL h<sup>-1</sup>; urea clearance rate was  $55.5 \pm 11.8$  mL h<sup>-1</sup>. Glomerular filtration rate (GFR), measured with <sup>51</sup>Cr-EDTA in 5 fetuses on 1-4 occasions, was  $111.4 \pm 23.3$  mL h<sup>-1</sup>. Fractional