

Abstract:

Baboon *in vitro* fertilization requires capacitated sperm in appropriate media. In this study, we compared the effect of baboon serum (BaS), human serum albumin (HSA) and bovine serum albumin (BSA) on baboon sperm capacitation. Five males ($n = 5$) were electroejaculated and 43 oocytes retrieved from super-ovulated female baboons ($n = 10$). Each sperm sample was assessed for initial motility and concentration before and after swim-up. For swim-up, each sperm sample was incubated separately in Biggers–Whitten–Whittingham media containing either BaS, HSA, BSA or without protein supplementation (control). After swim-up, each sperm aliquot was incubated with two to three oocytes. The number of sperm bound to the zona was evaluated after overnight incubation. Sperm motility and zona binding was significantly higher after capacitation in media supplemented with BaS than in HSA or BSA or in media without protein supplementation ($P < 0.05$). Baboon serum is superior to HSA or BSA for baboon sperm capacitation and zona binding.