Collared peccary (*Pecari tajacu*) and White-lipped peccary (*Tayassu pecari*) are mammals in the family Tayassuidae that live in herds in America. According to the International Union for Conservation of Nature (IUCN), their range has been reduced during the last 20 years. These species are probably in significant decline because of widespread habitat loss and over-hunting through much of its range. By this way, captive breeding becomes very important. Reproductive physiology and related studies are essential to apply assisted reproduction in the future.

Semen samples were collected from Southern Brazil animals in Paraná State (Foz do Iguassu: Collared peccary; Cascavel: White-lipped peccary). The animals were anesthetized and semen collected by electroejaculation. The seminal plasma protein was fractionated by SDS-PAGE 12% and analyzed by mass spectrometry after trypic digestion. Among proteins identified by MS-MALDI-TOF, from both species, some were related to apoptosis, and others related to ROS protection, spermatogenesis and Ca-ligant. These results seem to indicate normal turn-over or temporary subfertility due to prolonged sexual rest.

Word Keys: reproductive physiology, seminal plasma proteins, Tayassuidae.

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