

COLLECTION AND ANALYSIS OF SEMEN FROM CALLITHRIX PENICILLATA

V.M. Massaroto^{1,2}, F.M.Carvalho², P.R. Arakaki², T.S. Calvi², M. Nichi¹, M.A.B.V. Guimarães¹, M.A. Miglino¹, R.R. Valle^{1,2}

¹University of Sao Paulo, Sao Paulo, Sao Paulo, Brasil, ²Wildlife Management Environmental Consultancy Ltda, Sao Paulo, Sao Paulo, Brasil

Presenter's Email: rovalle@usp.br

The importance of knowledge on Neotropical primate reproduction is unquestionable and increasing since many species are cited as threatened in local and international lists of endangered species. *Callithrix penicillata* is endemic to Brazil, easily found in the Brazilian *Cerrado* and used as model species for endangered species in reproductive studies. This study is part of a plan to establish a sperm bank of Neotropical primates in Brazil and specifically aimed to assess the efficiency of semen collection by penile vibrostimulation and evaluate physical and functional characteristics of *Callithrix penicillata* sperm. Six recently wild caught adult animals were used (IBAMA permission 19924-1). After standard evaluation for physical characteristics, a simple staining technique for acrosome status, Eosin-Nigrosin stain for plasmatic membrane integrity and demonstration of cytochrome c oxidase activity *in situ* by the oxidation of 3,3'-diaminobenzidine (DAB), the results found were pH 7.3 ± 0.03 ; volume $7.02 \pm 0.54 \mu\text{L}$, sperm motility $81.2 \pm 2.6\%$, concentration $29.53 \pm 6.25 \times 10^6$ spermatozoa/mL, sperm with intact plasmatic membrane $84.7 \pm 2.6\%$, with intact acrosome $78.9 \pm 2.7\%$ and with high mitochondrial activity (Class 1) 78.3 ± 3.4 . The results obtained were compared with those obtained in other studies for *Callithrix jacchus* due to the lack of information available for *Callithrix penicillata*. Both species had very similar results. Further investigations are required to improve the sperm collection and cryopreservation methods for Neotropical primates to the level that it will become useful for practical sperm banking. We thank CAPES, WLM and CELAN for their support.

Keywords: reproduction, sperm, marmoset, cryopreservation