In spite of the importance of chemical signals (pheromones) in the reproductive behaviour of lizards, the chemical compounds secreted by their femoral glands, which may be used as sexual signals, are only known for a few lizard species. Based on mass spectra, obtained by GC-MS, we found 49 lipophilic compounds in femoral gland secretions of male tegu lizards (*Tupinambis merianae*) (fam. Teiidae), including a very high proportion of carboxylic acids and their esters ranging between \(n\)-C\(_8\) and \(n\)-C\(_{20}\) (mainly octadecanoic and 9,12-octadecadienoic acids), with much less proportions of steroids, tocopherol, aldehydes, and squalene. We discuss the potential function of these compounds in secretions, and compare the compounds found here with those documented for other lizard species.

**Key words:** Tegu Lizard, Femoral Glands, Fatty Acids, Steroids