

## Autonomic and sensitive somatic innervation of the ostrich elbow and knee joints articular capsule

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### SUMMARY

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The present research was carried out on the fibrous layer of the ostrich's elbow and knee joints articular capsule, employing opportunely modified gold chloride Ruffini's method, to study the autonomic and sensitive somatic nerve components.

The distribution of both nerve components followed frequently the vascular networks.

The autonomic innervation was represented by isolated or grouped ganglion cells, frequently placed along the course of nerve trunks, close to the epineurium or located within the perineural connective tissue.

The sensitive somatic innervation was constituted by free and encapsulated corpuscles. The last one, morphologically classified as Pacini, Pacini-like and Golgi-Mazzoni's corpuscles, were found isolated or grouped to constitute simple and complex flower sprays, "opposito-polar corpuscles" and "poichilomorphous fibres".

The very few Golgi-Mazzoni's corpuscles were found only in the knee joint articular capsule.

The two nerve components, found in the considered districts, did not shown significant quanti-qualitative and topographic differences. This datum, at least in appearance, seems to conflict with the ostrich functional aptitudes. In fact, the ostrich is a bird unable to fly but very able to run.

### INTRODUCTION

The sensitive innervation of different articular districts has been already studied in primates and man (Loffredo, 1949; Rossi, 1950; Stilwell, 1957; Ralston III et al., 1960; Poláček, 1961, 1965, 1966; De Luca and Grosso, 1968; Palmieri and Veggetti, 1970, 1971; Sathian and Devanandan, 1983; Pionchon et al., 1986; Zimny, 1988 a; Zimny et al., 1988 b; De Avila et al., 1989; Fuss, 1989; Krenn et al., 1990; Babu and Devanandan, 1995), in mammals (Ottolenghi, 1931, 1932; Rossi, 1950;