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## **Epiligament or paratenon is more appropriate for describing the enveloping tissue of the cruciate ligaments of the human knee?**

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## LETTER TO THE EDITOR

### **Epiligament or paratenon is more appropriate for describing the enveloping tissue of the cruciate ligaments of the human knee?**

Georgi P. Georgiev, Epiligament or paratenon

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I read with interest the article by Kim et al. [5] on description of a macroscopic and histological observations of the paratenon (PT) of the cruciate ligament in 43 human fetuses — “Paratenon of the cruciate ligaments of the knee: a macroscopic and histological study of human fetuses.” The authors described PT with a thick armor-like appearance distant from the infrapatellar fat pad. According to them the anterior cruciate ligament (ACL) is more deeply embedded in the PT compared to the posterior criciate ligament. The PT is presented by abundant arteries and veins especially at and near the crossing between the ligaments and had a well-presented venous plexus.

However, I would like to make my modest comments about the enveloping tissue of the knee ligaments. I do not agree with the author’s statement that the tissue around the cruciate ligaments should be termed PT. Firstly, when describing the tissue around ligament structure is more logically and accurately to use the term epiligament (EL) [epi-(Greek-on or upon); ligament (Latin-ligare, to bind)] [2]. In 1990, Bray et al. [1] in their article “Fine vascular anatomy of adult rabbit knee ligaments” defined for the first time the term EL. Nowadays, the morphology of the EL of the ACL in human knee has been described in details by Georgiev et al. [3, 4]. After describing the EL morphology of the ACL and comparing it to medial collateral ligament of the knee, the authors formulate and propose a new theory about the ACL healing failure. Also I could not agree that the careful removal of the PT along the

cruciate ligaments is a critical step of knee surgery. There is no such an orthopedic technique and why should we remove the EL in intact ACL as we know that the main blood supply to the ligament is localized in its EL tissue. Third, I could not accept the statement that the orthopedic surgeons and interventional radiologists consider the PT as a basic anatomical tissue along a ligament, not along a tendon. When and why the clinicians accept that the PT is part of ligament structure? As I pointed out, the description of the structure should be included in its name.

In conclusion, I consider that the term PT should be directed only to the tendon. Its usage for describing of the ACL enveloping tissue will provoke embarrassment and could mislead the readers.

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