Abstract:

Studying reptilian embryonic development provides answers to many questions related to the development of tetrapods. Reptilian skin has been recently considered in studies at the evo-devo level. The lizard epidermis has to be shed periodically. At the embryonic level, contention exists regarding the first layers to appear, whether the oberhautchen or the clear layer, and whether the shedding complex develops before hatching. Geckos exhibit diverse morphologies independently evolved multiple times within the clade, such as subdigital pad lamellae. Here we investigate the embryonic development of Tarentola mauritanica and establishing its embryonic table. Primarily we follow the development of the integument. This is a closely related species to T. annularis and it is crucial to investigate whether it has the same derived digital condition of claw regression. Eleven embryonic stages are described according to the external morphological characteristics of the embryos. Interestingly, the oviposition stage appears earlier than its close relative T. annularis, and the total incubation time is less. We also describe skin development, adding clear evidence to the debate on the development of the shedding complex, which we found is developed before hatching. We describe one layer of periderm and the clear layer as the first embryonic epidermal layers. Generally, our results show the genus Tarentola to have the advantage of being a unique taxon, easily breed at the laboratory, with multiple clutches per year, and with an earlier stage at oviposition. That could be a model animal for embryonic development and experimental embryology studies.
أ.د/ صالح عبد العليم محمد العوني
أ.د/ إيهاب معاذ أبو زيد