In the present study, the larval stages of the Egyptian toad Bufo regularis (Bufonidae) were used. Two groups of newly fertilized eggs were analyzed. One group was irradiated with ultraviolet for the production of haploid individuals while the second group remained intact as normal diploid individuals. Transverse section of diploid and haploid embryo at stages organ development and modification, prometamorphosis and climax, were used to study programmed cell death (apoptosis). Apoptotic cells were detected using the light microscopical study in liver, kidney and spleen of the two tested group of B. regularis tadpoles. Moreover, the electron microscopical study was used to determine the ultrastructure characteristic of apoptosis. Electrophoretic analysis of the genomic DNA of dying cells was performed to look for the characteristic internucleosomal nucleolysis that accompanies classical (apoptotic programmed cell death (PCD).

Keywords: Bufo regularis, Diploid, Haploid, Amphibia, Embryonic stages, Metamorphosis, Apoptosis, Liver, Kidney, Spleen, Electron microscopy, Programmed cell death, Anuran