

QUANTITATIVE CHARACTERIZATION OF PEDERIN IN THE ROVE BEETLE, STAPHILINIDAE; *PAEDERUS*, IN MAZANDARAN AND FARS PROVINCES, IRAN.

¹SAHAR BAZRAFKAN, ²MOHAMMAD ALI OSHAGHI, AND
²MANSOUREH SHAYEGHI

¹International Campus, Tehran University of Medical Sciences (IC-TUMS), Tehran, Iran.

²Tehran University of medical Sciences, Tehran, Iran.

Abstract Rove beetles, genus *Paederus* have a vesicant toxin amid, in their hemolymph, named pederin, and caused lesions on human skin. It was first described by a procedure on 25 million *Paederus fuscipes* collected from the field. A few studies were conducted about pederin content of each beetle. It is very various in each specimen. According to a Pavan study in 1963, at least 1 µg pederin per one male adult beetle is expected and 10 times more in females. Kellner and Dettner (1995) assessed a new method for quantification of pederin in each beetle for the first time. Before that, severity of dermatitis caused by *Paederus* beetles was the only method for determination of pederin content. They also reported 0.1-1.5 µg of the toxins in males and 0.2-20.5 µg in females, 10 fold more than males in most cases. Results: In this study pederin is quantified in field specimens of two province of Iran, Fars (south of Iran) and Mazandaran (north of Iran). Males contain 0.76µg, 0.73µg and 0.36µg for *P. Fuscipes* Mazandaran, *P. Fuscipes* Fars and *P. littoralis* Fars and females 10.89 µg, 10.31 µg and 3.29 µg of the toxin respectively.

