

## **P113. ENTOMOTOXICOLOGY IN FORENSIC SCIENCES: CURRENT APPROACHES**

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In Forensic Sciences, entomotoxicology is a new branch compared to entomology. In the researches concerning the active substances leading to death, when tissue and biological liquid samples cannot be found, bone marrow and hair tissues, and when they cannot be obtained, Diptera and the other Arthropods are reliable alternative materials for toxicologic analysis. Entotoxicology examines the toxicologic analysis application of the necrophagous bugs, for the purpose of establishing the toxins found in the tissues after drugs and intoxication. Moreover, it is also assessed to assist PMI (proportional mortality indicator) estimations. In view of the definition and verification of the toxic substance that resulted in death particularly in death due to heroine and cocaine abuse and drug intake in cases of accident or suicide, interest in this branch has increased in forensic medicine. Bugs easily homogenize and can be easily analyzed with general toxicological analysis procedures. To determine the drugs in the bugs, in general gas chromatography-mass spectrometry (GC / MS) and liquid chromatography-mass spectrometry (LC / MS) are used. As an alternative method, for establishing the metabolic footprint of the bugs (lipids, proteins etc.), near infrared spectroscopy (NIRS), which is a fast and more cost-effective method, is used. In this research, examples of entomotoxicological studies are given and it is aimed to examine the issue with the new alternative methods.