

## **P70. THE CYTOTOXIC EFFECTS of DURSBAN 4 INSECTICIDE on ALLIUM CEPA MERISTEM CELLS**

Serap TOPCU<sup>1</sup>, Sema (TAN) CETİN<sup>2</sup>, Aysun ERGENE<sup>2</sup>

<sup>1</sup>Ankara University, The Institute of Forensic Sciences, Dikimevi, Ankara, TÜRKİYE

<sup>2</sup>Kirikkale University, Department of Biology, Yahsihan, Kirikkale, TÜRKİYE

Pesticides are chemical substances, that remove and destroy microorganisms, insects, weeds, fungi cause a loss of product during production, consumption and storage of agricultural products, regulate plant growth by improving quality and productivity. Commonly used pesticides lead a negative impact on health, environment, and economy of a country. It has been identified that pesticides have effects stoper the development, disease-causing, genotoxic, mutagenic, carcinogenic and even lethal effects on especially creatures are not target with in vivo and in vitro studies. In TÜRKİYE, the most commonly used type of pesticides ise insecticide and it creates the dangerous toxic impact on plants. Therefore, pesticides play an important role in toxicology.

In this study, the cytotoxic effects of “Dursban 4” insecticides on *Allium cepa* (onion) root cells were investigated. It is investigated that mitosis and chromosome damage and micronucleus formation on onion root cells growed in a concentration of insecticide 600, 1200, 1800 ppm solution. Germinating onion root cells at the specified concentrations have been fixed, dyed and examined under light microscopy. As parallel with the increase in concentration of Dursban 4, the chromosome breakage, chromosome stickiness, track formation, chromosome loop, delayed and irregular chromosome distributions were determined in the root tip meristem cells.

As a result, it is determined that attempted concentrations of “Dursban 4” insecticide adversely affected *Allium cepa* chromosome and stimulated the formation of micronucleous.