

DNA Test Helps Uncover Criminal Case

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DNA (Deoxyribo Nucleic Acid) is an important material for law enforcers to uncover criminal cases, victim identification, disaster, or familial relationship.

“DNA test can uncover many cases of crime, such as killing, rape, or tracing biological children. Almost 40% cases in the DNA lab are related to tracking biological children,” said Head of DNA Lab of the Police, Comm. Putut Tjahjo Widodo DFM., M.Si., at Faculty of Biology UGM on Monday (4/9).

Putut was present to give a lecture in Forensic DNA during the opening of graduate course of the Faculty. Putut explained DNA was important to uncover various criminal cases or accidents as it can help identification of the victim that cannot be done visually, for example victims of fires.

“Visual identification is hard to do except the case is still fresh, but for victims of fire it will also be difficult,” he said.

DNA test is also carried out to resolve various civil cases as well as research and development. DNA test can be done using core DNA, chromosome X, chromosome Y, and mitochondria.

“The samples will be diverse that relate to cells, such as blood, saliva, urine, tooth, hair, etc,” said the alumnus of Faculty of Biology UGM.

Putut pointed out an example to reveal raping cases by examining the DNA cells that are left in the body of the victim such as sperm, perspiration or saliva. These samples can be used to track down the perpetrator.

Despite the effective use of DNA test in revealing cases by police officers, this method also has vulnerabilities of its own. The DNA can get damaged due to contamination, decay, and degradation. DNA contamination may happen due to the entrance of foreign DNA due to failures by officers that are not being sterile while collecting the samples or leaving trash. To avoid this from happening, the officer needs to wear hand gloves, masks or head cap on the site or during the DNA test.

“While degradation is caused by endoenzyme, microorganism, organism, environment and chemical. This process can be halted by drying, cooling or preserving,” he said.

Dean of Faculty of Biology UGM, Budi S Daryono M.Agr.Sc., Ph.D., said this lecture was aimed at introducing forensic biology studies as part of biology studies to the students. Forensic biology has an important role to help uncover cases emerging in the society.

“Hopefully, the general lecture can give an illustration related to the role of biology in resolving problems that emerge in the society, especially to help forensic studies,” he said.

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