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Human papillomavirus (HPV) genotype distribution in women with cervical cancer in Padang and Pekanbaru, Indonesia

Marlina¹, Andani Eka Putra¹, Yufri Aldi¹, Densi Selpia Sopianti², Dewi Gulya Hari³ and Arfandi¹¹Andalas University, Indonesia²Akademi Farmasi Yayasan Al-Fatah, Bengkulu, Indonesia³Sekolah Tinggi Farmasi, Riau, Indonesia

Cervical cancer is the fourth most common cancer in women, with an estimated 265,563 deaths and 527,624 new cases in 2012. Most occurred in less developed regions, which accounted for nearly 12% of all cancers. In Indonesia, cervical cancer is the number two cancer that is about 20,928 new cases per year and 9,498 cases lead to death. High incidence of cervical cancer is due to lack of health facilities associated with this disease, such as a vaccine for cervical cancer, cervical cancer early detection, and treatment of precancerous cervical lesions. One of the causes of cervical cancer is human papillomavirus (HPV). The results of the study of the RSCM Jakarta, found three predominant types of HPV in cervical cancer patients, namely type 16 (14%), type 18 (39%) and type 52 (14%). Based on the severity of the disease, the HPV is divided into two, namely High-Risk and Low-Risk. High-Risk types are 16, 18, 31, 33, 39, 45, 50, 51, 52, 53, 55, 56, 58, 64 and 68 and the Low-Risk types are 6 and 11. This time, the research was conducted by taking samples from M. Jamil Hospital in Padang and Arifin Ahmad Hospital, Pekanbaru. From a sample of 100 patients with cervical cancer, HPV isolates were 86. For the first phase, molecular studies for Type 18 was carried out, that is by looking for variations in the molecular equivalent genes E5, E6 and E7. The results were compared with the reference sequencing analysis HPV types 18 NC_001357 in Genbank. The results showed that there are no variations or amino acid changes in the genes E5, nucleotide variation occurs in gene E6 which is transition and trans version variation and they have silent mutation in gene E7. Relationship between HPV18 isolates from patients with cervical cancer at the Arifin Ahmad Pekanbaru, Riau and M. Djamil Hospital in Padang, West Sumatra is based on the geographical location as well as a greater kinship with variant isolates of Asian-Americans compared with European variants.

Biography

Marlina has completed her PhD from Universiti Putra Malaysia. She is the Professor of Microbiology in Faculty of Pharmacy, Andalas University. She is also interested to research on Vaccines, especially for human papilloma virus and stem cell medicine, especially for osteoarthritis disease.

marlina_adly@yahoo.com

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