The Study on the Immobilization of NTA-MutS on PMMA Substrate

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In this study attempts to develop a sensing method to detect mismatched DNA in order to diagnose cancer. The sensing method will be developed to use for early diagnosis of cancer. Thus, protein immobilization was applied on the surface of the sensor in order to facilitate the detection of mismatched DNA. This method need gold surface to immobilize NTA (nitrotriamino acid). But this process is very complicated and expensive cost. Therefore, we try to immobilize NTA using PMMA (poly methyl methacrylate) polymer in this research to improve this method. In this result of experimental, we could immobilized NTA onto PMMA substrate. And we could immobilized MutS onto NTA surface. In this study revealed that we could directly immobilize the NTA to the PMMA substrate not used Gold substrate. Also, we could directly immobilize the MutS to the NTA using the EDC solution. In addition, we can expect that the mismatched DNA can be detected from the results.