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The MEN2B due to de novo mutation M918T in Algerians patients

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The MEN2B is a rare disorder which contains a CMT associated with pheochromocytoma and other clinical signs. The MEN2B is a hereditary disease, transmitted as an autosomal dominant form and associated to RET proto-oncogene mutation. The genotypic diagnostic is based on the identification of a mutation in the RET gene. These two patients with 22 years and 20 years, belonging to two different families diagnosed MEN2B. The genetic study has concerned the patient of the first family, his mother and his sister and also the patient of the second family, his father, his mother and his brothers and sisters. DNA extraction was done by the salts method. Genetic study, concerning the exons, 15 and 16, was made by PCR amplification and followed by sequencing on ABI 3130 Applied Biosystems. The same mutation M918T was found in both patients. This mutation is localized in exon 16 in heterozygous form. This mutation was not found in other family members.The detection of germline mutation M918T in both index cases confirms the clinico-biological diagnosis of MEN2B form. This mutation of codon 918 in exon 16 is highly specific of the MEN2B (95%). Related genetic testing has not found the mutation in other family members, then this mutation is probably appears de novo, as found in the literature.

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AgI(CN)2 içeren yeni bir koordinasyon bileşiğinin c6, ht29 ve HeLa hücre hatlarında antiproliferatif ve apoptotik etkisi

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Bu çalışmanın amacı, AN3 (Cd2C21H36N13O6Ag5) olarak kodlanan yeni bir siyano köprülü {AgI(CN)2} koordinasyon bileşiğinin antiproliferatif ve apoptotik etkisini HeLa, C6 ve HT29 kanser hücre hatları üzerinde araştırmaktır. Bu nedenle, yeni koordinasyon bileşiği "tuğla-harç" metodu kullanılarak sentezlendi [1]. Bu bileşiğin HeLa, C6 ve HT29 kanser hücre hatları üzerindeki antiproliferatif ve sitotoksik aktivitesi, sırasıyla, BrdU hücre proliferasyon testi ve laktat dehidrogenaz (LDH) testi ile belirlendi. AN3 bileşiğinin etki mekanizması DNA bantlaşma testi ve migrasyon testi kullanılarak açığa çıkarıldı. BrdU hücre proliferasyon ve LDH test sonuçlarına göre, bu bileşik kontrol antikanser ilaç olan 5-fluorourasil (5-FU) ile karşılaştırıldığında, tümör hücre hatları üzerinde dikkate değer şekilde antiproliferatif ve sitotoksikdir. LDH test sonuçları, bu bileşiğin 5-florourasil'den önemli şekilde daha sitotoksik olduğunu ortaya çıkarmıştır, belki bu bileşik hücre membranında yıkıma yol açmış olabilir. Bu bileşiğin DNA bantlaşmasına neden olması, apoptozu uyararak hücreler üzerinde etkili olabileceğini işaret etmektedir. AN3 verilmesi hücre göç hızının yavaşlamasına yol açtığından HeLa hücreleri AN3'e duyarlılık gösterir. Çalışma sonuçları, AN3 bileşiğinin apoptozisi indükleyerek etki eden potent antikanser bir molekül olduğunu göstermiştir.

Antiproliferative and apoptotic effect of a novel coordination compound containing AgI(CN)2 On C6, HT29 and HeLa cell lines

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The objective of this research was to investigate the antiproliferative and apoptotic effect of a new cyano-bridged {AgI(CN)2} coordination compound, coded as AN3 (Cd2C21H36N13O6Ag5), against on HeLa, C6 and HT29 cancer cell lines. Therefore, the new coordination compound was synthesized using "brick-mortar" method [1]. The antiproliferative and cytotoxic activities of AN3 on HeLa, C6 and HT29 cancer cell lines were determined using BrdU Cell Proliferation Assay (BCPA) and lactate dehydrogenase assays respectively. The mechanism of action of the AN3 was clarified using DNA laddering assay and migration assay. According to BCPA and LDH test results, AN3 were significantly antiproliferative and cytotoxic on the tumor cell lines compared to control anticancer drug, 5-fluorouracil (5-FU). The LDH test results revealed that the AN3 was significantly cytotoxic than 5-FU, suggesting that AN3 may be detrimental to the cell membrane. The compound AN3 caused laddering of genomic DNA, indicating that it may act through inducing apoptosis on the cells. The results of the study indicated that the AN3 is a potent anticancer molecule by inducing apoptosis.

Bu çalışma,112T696 nolu proje ile TÜBİTAK tarafından desteklenmektedir.