Iraqi Journal of Cancer and Medical Genetics

دراسة التأثيرات السمية لنواتج تفاعل ميلارد لمحلول الشرش على خطوط الخلايا السرطانية خارج الجسم الحي 2

[illegible]***

*[illegible]
**[illegible]
***[illegible]

المستخلص:

[illegible] 1% [illegible] 5 ;3 ;1 [illegible] 9.0 [illegible] Human Lorynx Epidermoid carcinoma- Hep-2 [illegible] (Ahmed- M- hammod- Nahi- AMN-3 [illegible] (0.065 ؛ 1.25 ؛ 2.5 ؛ 5 [illegible]) [illegible] 24 ؛ 48 [illegible] 72 ؛ [illegible] 5 [illegible] 72 [illegible] Hep-2 [illegible] 1.25 ؛ 2.5 ؛ 5 [illegible] 48 ؛ 72 [illegible] AMN-3 [illegible] AMN-3 [illegible] Hep-2.

المقدمة:

[illegible] (Mammary Adenocarcinoma) [illegible] (9) [illegible] (17) [illegible] (14) [illegible] (6) [illegible] Maillard reaction products [illegible] (8 ؛ 11) [illegible] whey [illegible].

المواد وطرائق العمل:

[illegible] (15). [illegible] Hep2 [illegible] AMN-3 [illegible] RPMI-1640 [illegible] 37 [illegible] 3 [illegible] 15 [illegible] 200 [illegible] RPMI-1640 [illegible] Microlitter plate 96 well [illegible] 37 [illegible] 18- 24 [illegible] 200 [illegible] RPMI-1640 [illegible] 0 ؛ 0.625 ؛ 1.25 ؛ 2.5 ؛ 5 [illegible] 100 [illegible] 1 [illegible] 9.0 [illegible] 1 ؛ 3 ؛ 5 [illegible] 7 [illegible] 0.22 [illegible] 24 ؛ 37 [illegible] 48 ؛ 72 [illegible] Crystal violat [illegible] 50 [illegible] 492 [illegible]:

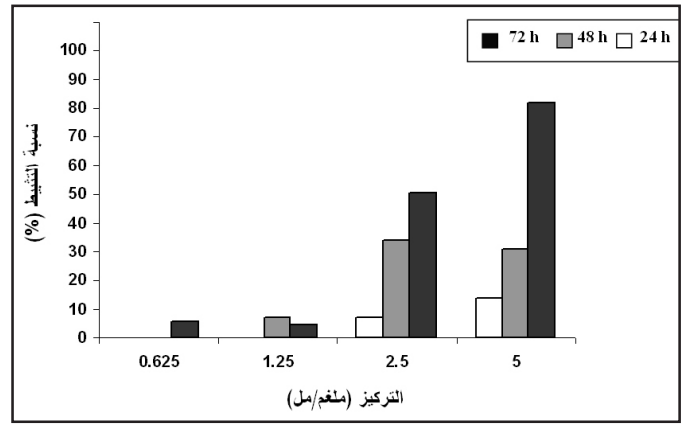
$$\text{نسبة التثبيط} = \frac{\text{قراءة جهاز الاليزا للخلايا غير المعاملة} - \text{قراءة جهاز الاليز للخلايا المعاملة}}{\text{قراءة جهاز الاليزا للخلايا غير المعاملة}} \times ١٠٠$$

النتائج والمناقشة :

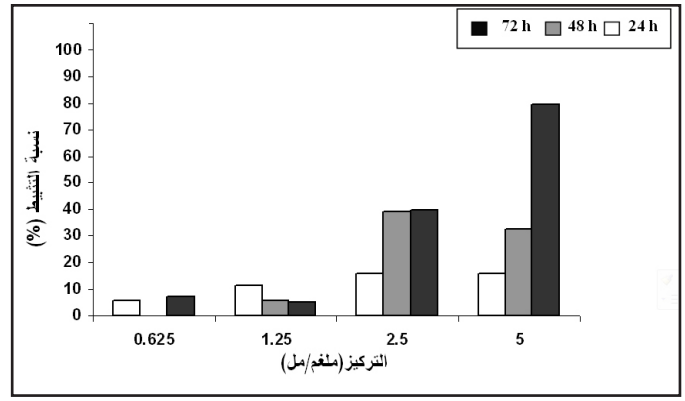
دراسة التأثير السمي لنواتج تفاعل ميلارد لمحلول الشرش في خلايا سرطان الحنجرة البشري خط خلايا Hep-2

[illegible] 1 ؛ 3 ؛ 5 [illegible] 9.0 [illegible] Hep-2 [illegible] 5 [illegible] (1) ؛ (2) ؛ (3) [illegible] 1 ؛ 3 ؛ 5 [illegible] 5 [illegible] (81.9 ؛ 79.33 ؛ 83.49%) [illegible] 72 [illegible] 24 ؛ 48 [illegible] 48 [illegible] 0.625 ؛ 1.25 [illegible] 2.5; 5

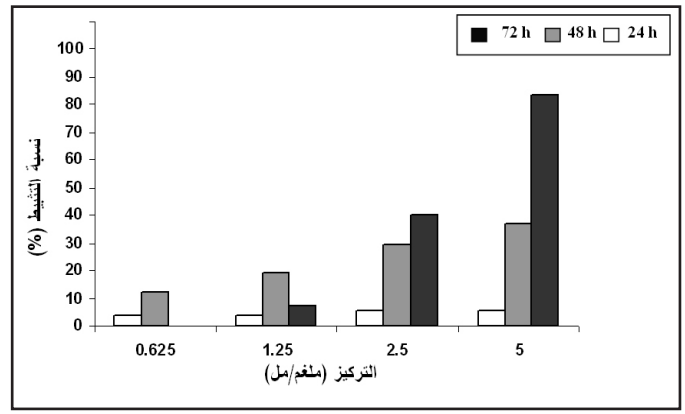
ÅŤÊÅφ ŘÅÅĤǪöä gÆŋş Õŋ / ĺ8Ÿŋ.



شكل *(1)*: تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز *1%* المعامل بالغليان لمدة ساعة واحدة واس هيدروجيني *9.0* في الخلايا السرطانية *Hep-2* خلال *24* و *48* و *72* ساعة من التعريض.



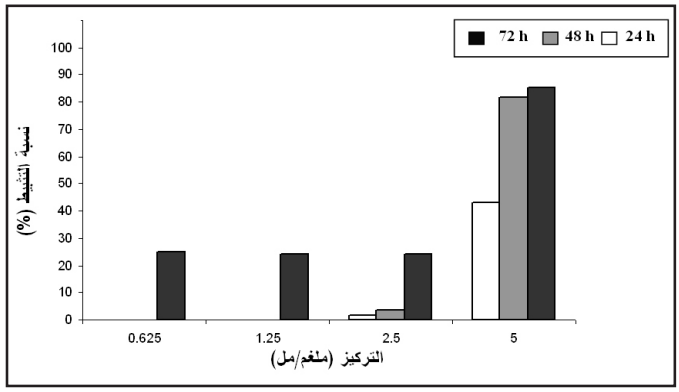
شكل *(2)*: تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز *1%* المعامل بالغليان لمدة *3* ساعات واس هيدروجيني *9.0* في الخلايا السرطانية *Hep-2* خلال *24* و *48* و *72* ساعة من التعريض.



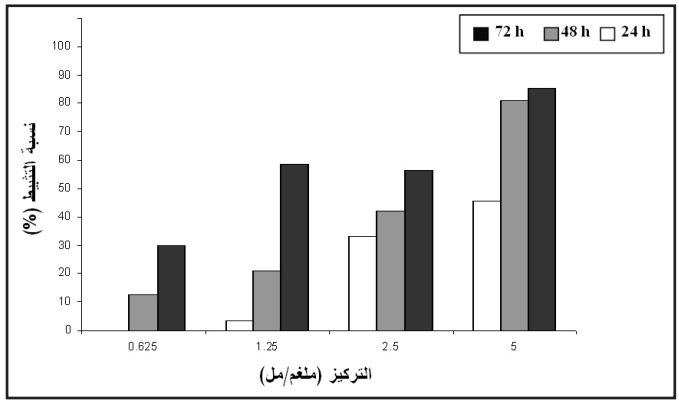
شكل *(3)*: تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز *1%* المعامل بالغليان لمدة *5* ساعات واس هيدروجيني *9.0* في الخلايا السرطانية *Hep-2* خلال *24* و *48* و *72* ساعة من التعريض.

التأثير السمي لنواتج تفاعل ميلارد لمحلول الشرش على خلايا سرطان الغدة اللبنية الفأري خط خلايا *AMN-3*

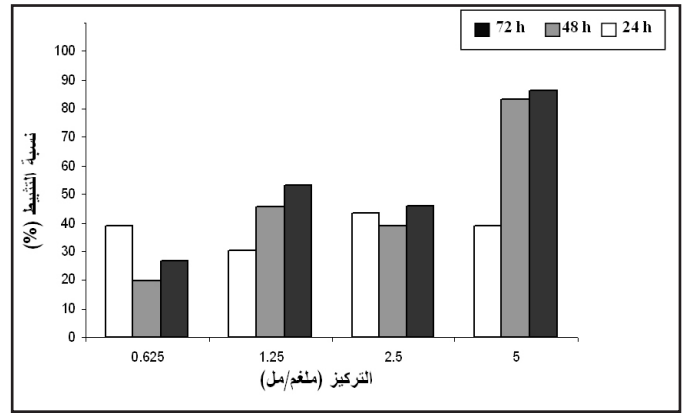
ǻøŸŋ ğŸʒÅÅǩ ĵǩǡʐÅö ÙĘĞǰǩ ĞĜÊφ ʔŸʒä ɹä (6) ş (5) ş (4) ȯÅÒïɼä ÅŤŢǩ ŦĐǄşøÆŧŁ âäş Ğʒʒè 5 ¡3 ¡1 gÆţ ɹÅŧŸ8öÅæ ÕŋÅĤţä êÅøÎöä ȯʐŸŢ ȸŋ gÅŘĤŧţä Ķ8Ÿä æä ÛÅŀŸʅä ʒŋ Ğʒʒøè 72 ŘÅÅĤǩ gÆŋş Õŋ/ĺ8Ÿŋ 5 ÅŧÕÅǩ Æøʒ ɹÅõ 9 ğŸʒÅÅǩ ĵǩǡφ ƙǵ Ž ÛƂäʐǪöä ʔŸʒ ĞǫŸǯöä ğÅşǪǭ 86.5% ş 85.1 ş 85.4 ÕŋÅĤŋş Õŋ/ĺ8Ÿŋ 2.5 ş 1.25 ǨÅŧÕÅǩ ɃØöä êÅÎöä ȯʐŸŢ ȸŋ gÅŘĤŧţä ǻøŸŋ ÅŀŸʅä Ž ʂÛĘĞǰǩ ÆĞè Æş ÅŀŸʅä ʒŋ ȸŘΣä gÆŋ ÈÅÅæş ğÅʒÅøè 3 gÆţ ɹÅŧŸ8öÅæ ÆÕʐ ğÅʒÅè 5 gÆţ ɹÅŧŸ8öÅæ ÕŋÅĤţä ȯʐŸĤŧţä Åŋä Û56.49% ş 58.40 ĞĜøÊÅæş gÆţ ÕŋÅĤţä ȯʐŸĤŧţä ʔÛʒä ƙǵ Ž 46.2% ş 53.4 ÅŁøäÆÕŋ ÙĘĞǰǩ ĞĜÊφ ÆĞè ÅŧÕÅǩ ɹä Şǵʐö ÅŧÕ ÛȸÅÅŧÕÅǪöä ŸÒö 24% Ķ8Ÿä ÙĘĞǰǩ ĞĜøÊφ ǖùşä Ğʒʒøè 1 ÙĘĞǰǩ ĞĜÊφ ÅŤŢǩ Ɓ Ğʒʒøè 48 ş 24 ŘÅÅĤǩ gÆŋş Õŋ/ĺ8Ÿŋ 1.25 ¡0.625 ş Ğɨ äş ƙʏ Ž ÛÅŀŸʅä Æş ǧǻǻää ǨØŁ ĞĜÊÅöä ÕÒÎæ ǍÅù ǷÅÅÅæ gÅÅŋ gÆŋ ɹÅŧŸ8öä.



شكل *(4)*: تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز *1%* المعامل بالغليان لمدة ساعة واحدة واس هيدروجيني *9.0* في الخلايا السرطانية *AMN-3* خلال *24* و *48* و *72* ساعة من التعريض.



شكل *(5)*: تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز *1%* المعامل بالغليان لمدة *3* ساعات واس هيدروجيني *9.0* في الخلايا السرطانية *AMN-3* خلال *24* و *48* و *72* ساعة من التعريض.



شكل (6): تأثير تراكيز نواتج تفاعل ميلارد لمحلول الشرش بتركيز 1% المعامل بالغليان لمدة 5 ساعات واس هيدروجيني 9.0 في الخلايا السرطانية AMN-3 خلال 24 و 48 و 72 ساعة من التعريض.

[illegible] FL529L [illegible] (Lung Carcinoma [illegible] GXF251L [illegible] (Gastric Carcinoma [illegible] CXF97 [illegible] (5 [illegible] Colorectal) (12 ş. [illegible] 72 [illegible] AMN-3 ş Hep-2 [illegible] (12) [illegible] 3-hydroxy-(2-furyl)methyl-3-cyclopentene [illegible] 10 [illegible] 50 [illegible] 1,2,3-trihydroxy-pyrrolidinium-2-4- [illegible] dihydroxy-2,5-dimethyl-1-carboxymethy-pyrrole [illegible] 100 [illegible] 2-methoxy-(2-furyl)- [illegible] methyl pyrano [illegible] 4-hydroxy- [illegible] 5-methyl-furan [illegible] Caco-2 [illegible] (4) [illegible]

[illegible] (Colon adenocarcinoma [illegible] 48 [illegible] 72 [illegible].

[illegible] M, G2, [illegible] Furanone [illegible] (G1 (12 [illegible] S [illegible] DNA [illegible] Pyranopyranose [illegible] (10ş7).

[illegible] (12) [illegible] Microtubule [illegible] (Antioxidant) [illegible] (16ş (2 [illegible] (Free radical Scavenging) [illegible] B-lactoalbumin [illegible] (3) [illegible] Cos-7 (Kidney [illegible] 60% [illegible] (HL-60 (Human promyeloblast [illegible] (fibroblast [illegible] (Bovine Serum) [illegible].

[illegible] AMN-3 [illegible] Hep-2 [illegible] (1) [illegible] Hep-2 [illegible] -Over expres) [illegible] (ing [illegible] mdr-1 [illegible] (Multi Drug Resistance) [illegible] P-gp [illegible] receptors [illegible] (13).

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1. [illegible] (2004). [illegible] Cyperus rotundusl. [illegible]

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Haerle, T. (2001). Scavenging of free radicals, antimicrobial and cytotoxic activies of the maillard reaction products of B-lactoglobulin glycated with several sugars. J. Agric. Food

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The Cytotoxic Effect of Maillard Reaction Products from Whey on the Cancer Cell Lines *In vitro*

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Summary:

The cytotoxic effect was tested of whey products (1%) boiled for (1, 3, 5 hours) and PH (9.0) on the cancer cell lines (Human Larynx Epidermoid carcinoma Hep-2 and Mouse – Mamary Adenocarcinoma (Ahmed – Mohammed – Nahi 2003 AMN3)by using four concentration (0, 0.625, 1.28, 2.5, 5) mg /ml for 24, 48, 72 hours an exposure period.

The result showed the genotoxic effect of whey products on cancer cell line was appeared at 5 mg/ ml concentration for 72 hours on Hep-2 and 1.25, 2.5 mg/ml concentration for 48 , 72 hours on AMN-3. The AMN-3 cell line more sensitive than Hep-2,