Sudan University of Science & Technology

College of Graduate Studies

:A study research on

Frequencies of ABO, Rhesus and Kell (K1 and k2) Blood Group Antigens in Aljaafra Tribe in Sudan .

(ABO, Rhesus , kell (K1,k2 تردد الزمر الوظيفيه لانظمة
فى قبيلة الجعافره السودانية .

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بِسْمِ اللّهِ الرَّحْمَنِ الرَّحِيمِ

قال الله تعالى

وَلَوْلَا فَضْلُ اللَّهِ عَلَيْكَ وَرَحْمَتُهُ لَهَمَّتْ طَائِفَةٌ مِنْهُمْ أَنْ يُضِلُّوكَ وَمَا يُضِلُّونَ إِلَّا أَنْفُسَهُمْ ۖ وَمَا يَضُرُّونَكَ مِنْ شَيْءٍ ۚ وَأَنْزَلَ اللَّهُ عَلَيْكَ الْكِتَابَ وَالْحِكْمَةَ وَعَلَّمَكَ مَا لَمْ تَكُنْ تَعْلَمُ ۚ وَكَانَ فَضْلُ اللَّهِ عَلَيْكَ عَظِيمًا ﴿١١٣﴾

صدق الله العظيم

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الاهـــداء :

الى من عرفت فيه النبل والشهامة ونكران الذات ,, ,,
الى من نطقت جوارحه بالعفة والاستقامة ,, ,, ,, ,,

اهـدى هـذا البـحث ,,

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□□□□□□□

هذه دراسة وصفيه تحليليه أجريت فى قبيلة الجعافره السودانيه لتحديد نسب تردد الاليل (الانتجين) لنظام ABO و العامل الريصى و Kell . لـ قد استغر قت الدراسه ثلاثه شهور (من اول يناير 2010 الى 30 مارس 2010) . هدفت الدراسه لتكوين قاعدة معلومات لهذه الـ قبيله لتحديد مدى التداخل بينها وبين الـ قبائل الاخرى بعد الـ مقارنه.

أخذت المواف قه من الاشخاص الذين سحب منهم الدم و قد تم احاطتهم بأهداف البحث . تم تجميع عينات من مائة شخص من الـ قبيله بحيث لا توجد بينهم صلة قرابه. و قد تم تجميع كل عينه فى وعاء سعته 2.5 مل يحتوى على مادة مانعه لتجلط الدم (EDTA) , تم فحص جميع العينات لمعرفة الزمر الوظيفيه.

وأظهرة نتائج الدراسه أن نسبة تردد الزمر الوظيفيه للدم التابعه لنظام ABO أن الزمره الوظيفيه O كانت الاكثر ترددا بنسبة (40%) تليها A بنسبة (32%(ثم Bبنسبة (20%) و قد كانت الزمره الوظيفيه AB هى الا قل ترددا بنسبة (8%) .

وفى نظام العامل الريصى تبين ان الزمر الوظيفيه (c) , (e) , (D) هى الاكثر ترددا و قد كانت نسبها (94%) , (82%) , (75%) على التوالى . و قد كانت الزمر الوظيفيه (E) , (C) هى الا قل ترددا بنسبة (66%) , (20%) على التوالى .

و قد كانت الزمر الوظيفيه k2, K1 لنظام 98% k2) , (3% K1) (Kell .

Abstract

This is study was a cross sectional descriptive study conducted in Al-Gaafrah Sudanese tribe to determine the frequency of the ABO Rhesus, and Kell antigens. This study was conducted in a period of three months (from Jan. 2010 to March 30, 2010). It aimed to establish a data base an information base for the tribe to determine the extent of overlapping between them and other tribes after comparison.

Blood was collected from the people after taking their consent. Samples were collected from one hundred people from the tribe (non-relatives) in a 2.5 ml EDTAcontainer to avoid blood clotting, all samples were examined to determine blood groups.

The results of this study were that the percentage of frequency of functional groups of the blood system's ABO that clique functional O were the most frequent rate (40%), followed by A rate (% 32 (and B by (14%) was the clique functional AB is the least frequent rate (8%) .

In the Rhesus system the results were that functional groups (D), (e), (c) is the most frequent has been attributed (94%), (82%), (75%) respectively. Where as the functional groups (C), (E) is the least frequent rate (66%), (20%), respectively.

The results of the Kell system were: (3% K1), (k2% 98) of the studied population .

Abbreviation

AHG	Anti-Human Globulin
AIHA	Autoimmune Haemolytic Anaemia
AML	Acute Myeloid Leukaemia
CHAD	Cold Haemagglutinin Disease
EDTA	Ethylenediaminetetraacetic Acid
ETC	Enzyme Treated Cells
HDFN	Haemolytic Disease of the Fetus and Newborn
HFA	High Frequency Antigen
HTR	Haemolytic Transfusion Reaction
IAT	Indirect Antiglobulin Test
IgA	Immunoglobulin A
IgD	Immunoglobulin D
IgE	Immunoglobulin E
IgG	Immunoglobulin G
IgM	Immunoglobulin M
IS	Immediate Spin
ISBT	International Society of Blood Transfusion
IUT	Intrauterine Transfusions
LFA	Low Frequency Antigen
LISS	Low Ionic Strength Saline
PBS	Phosp hate Buffered Saline
WAIHA	Warm Antibody Immune Haemolytic Anaemia

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