

# الآية

بسم الله الرحمن الرحيم

قال تعالى:

{ فَتَبَسَّيمٌ صَّاحِكًا مِّن قَوْلِهَا وَقَالَ رَبِّ أَوْزِعْنِي  
أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى  
وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا تَرْضَاهُ وَأَدْخِلْنِي  
بِرَحْمَتِكَ فِي عِبَادِكَ الصَّالِحِينَ }

**صدق الله العظيم**

**سورة النمل الآية 19**

# Dedication

To who taught me how to be available member  
In the community..

**My father**

Who gave me confidence

**My Mother**

Who taught me the meaning of life and gave me  
love

**To my Brothers and Sisters**

**To my teachers**

**To my friends**

Dedicate this simple effort with my love and best  
wishes

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# Abstract

This is across sectional a descriptive analytical study carried out at AL-RAKHA hospital in Khartoum state in period of January to may 2011 to estimate the frequencies of ABO , subgroup A and RH antigens in AL-Jaleen Sudanese ethnic group by using direct techniques, D<sup>u</sup> method to confirm D negative and ID-gel techniques , Hundred (100) About 2-5 ml EDTA blood samples were collected ,The frequencies of this study show in ABO group O were 69% , A were 16% , B were 10% , A1 were 4% and AB were 1% . There were 96% D positive and 4% D negative. The RH show C were 36%, c were 92%, E were 19% and e 94%. The phenotypes found that c D e were 58% , C c D e were 20% , C D E were 6% , C c D E were 6% , c e were 4% , C D e were 4% and C c D E e were 2% .In other previous studies in other tribes found same and different results.

## ملخص البحث

تم إجراء هذا البحث لدراسة التوزيع السكاني لمجموعة **A-sub group** من **ABO** و **Rhesus** في منطقة الدراسة. تم أخذ عينات من 100 شخص في عام 2011. تم إجراء الاختبارات باستخدام طريقة **EDTA** و **Du method** (D). النتائج أظهرت أن 69% من المجموعة **A** و 16% من المجموعة **B** و 10% من المجموعة **AB** و 5% من المجموعة **O**. كما أظهرت النتائج أن 96% من المجموعة **Rhesus** و 4% من المجموعة **D** و 36% من المجموعة **E** و 92% من المجموعة **C** و 94% من المجموعة **c** و 19% من المجموعة **e**.

النتائج أظهرت أن 69% من المجموعة **A** و 16% من المجموعة **B** و 10% من المجموعة **AB** و 5% من المجموعة **O**. كما أظهرت النتائج أن 96% من المجموعة **Rhesus** و 4% من المجموعة **D** و 36% من المجموعة **E** و 92% من المجموعة **C** و 94% من المجموعة **c** و 19% من المجموعة **e**. النتائج أظهرت أن 69% من المجموعة **A** و 16% من المجموعة **B** و 10% من المجموعة **AB** و 5% من المجموعة **O**. كما أظهرت النتائج أن 96% من المجموعة **Rhesus** و 4% من المجموعة **D** و 36% من المجموعة **E** و 92% من المجموعة **C** و 94% من المجموعة **c** و 19% من المجموعة **e**. النتائج أظهرت أن 69% من المجموعة **A** و 16% من المجموعة **B** و 10% من المجموعة **AB** و 5% من المجموعة **O**. كما أظهرت النتائج أن 96% من المجموعة **Rhesus** و 4% من المجموعة **D** و 36% من المجموعة **E** و 92% من المجموعة **C** و 94% من المجموعة **c** و 19% من المجموعة **e**.

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# List of abbreviation

Ab	Antibody
Ag	antigen
EDTA	ethylene diamine tetra acetic acid
IgA	Immunoglobulin A
IgG	Immunoglobulin G
IgM	Immunoglobulin M
ISBT	International society of blood transfusion
LISS	low ionic strength solution
LW	Landenstiner and Wiener
RBCs	Red blood cells
Rh	Rhesus
HDN	Hemolytic disease of the newborn.



المعاهد البحثية في السودان

**APPENDIX**  
**Sudan University of Science and Technology**  
**Collage of graduate studies**

**Determination of ABO, sub group A and Rh phenotypes and their frequencies in  
AL-jaleen ethnic group**

**Name**

**Sex**

**Age**

**Address**

**Real home**

**Home number**

**ABO group antigens**  
) A ( )      A1( )      B ( )      AB ( )      O  
(

**Rhesus antigens**  
) D ( )      C ( )      c ( )      E ( )      e  
(