

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{وَالْوَالِدَاتُ يُرْضِعْنَ أَوْلَادَهُنَّ حَوْلَيْنِ

كَامِلَيْنِ لِمَنْ أَرَادَ أَنْ يُتِمَّ الرَّضَاعَةَ}

صدق الله العظيم

سورة البقرة، من الآية ٢٣٣

بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا الا ما علمتنا
انك انت العظيم الحكيم

صدق الله العظيم

سورة البقرة الآية ٣٢



بسم الله الرحمن الرحيم

"وَوَصَّيْنَا نَا الْإِنْسَانَ بِوَالِدَيْهِ إِحْسَانًا حَمَلَتْهُ أُمُّهُ ۖ كَرَّهَا
وَوَضَعَتْهُ كَرَّهَا وَحَمْلُهُ ۖ وَفِصَالُهُ ۖ ثَلَاثُونَ شَهْرًا حَتَّىٰ إِذَا
بَلَغَ أَشُدَّهُ وَبَلَغَ رُبْعِينَ سَنَةً ۖ قَالَ رَبِّ أَوْزِعْنِي أَنْ
أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَىٰ وَالِدَيَّ وَأَنْ أَعْمَلَ
عَالِيًا تَرْضَاهُ وَأَخْلَجَ لِي فِي ذُرِّيَّتِي إِنِّي تُتِيبُ إِلَيْكَ وَإِنِّي
مِنَ الْمُسْلِمِينَ"

صدق الله العظيم

سورة الأحقاف الآية ١٥



Immunological Significance of Human Breast Milk and Its Effectiveness in Controlling Infection and Diseases in Infants and Children

Essay

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List of Abbreviations

Abbreviation	Means
AA	Arachidonic acid
BALT	Bronchiole-associated lymphoid tissue
BrMM	Breast milk macrophages
CMA	Cow milk allergy
CD	Cluster of differentiation
cDNA	Clone DNA
DCs	Dendritic cell
EGF	Epidermal growth factor
EPEC	Enteropathogenic <i>E. coli</i>
ETEC	Enterotoxigenic <i>E. coli</i>
FA	Fatty acid
Fc	Fragment crystalline
GALT	Gut-associated lymphoid tissue
G-CSF	Granulocyte colony-stimulating factor
GM-CSF	Granulocyte-Monocyte colony stimulating factor
GI	Gastrointestinal; Gastrointestinal tract
GIT	
GlyCAM	Glycosylation-dependent cell adhesion molecule
GRO	Growth-regulated oncogene
H₂O₂	Hydrogen peroxide
HCl	Hydrochloric acid

HDL	High-density lipoprotein
HGF	Hepatocyte growth factor
Hib	<i>Haemophilus influenzae</i> type b
HIV	<i>Human Immunodeficiency Virus</i>
HM	Human milk
HMC	Human milk cells
ICAM-1	Intercellular adhesion molecule-1
IDDM	Insulin-dependant diabetes mellitus.
IFN-α, -β, -γ	Interferon- alpha, beta, gamma
IgA, IgG, IgM	Immunoglobulin A,G,M
IGF I and II	Insulin-like growth factor
IL-1, -2, -4, -6, -8, -10	Interleukin 1, 2, 4, 6, 8, 10
IL-1 β	Interleukin 1 beta
IL-1RA	Interleukin 1 receptor antagonist
IMRs	Infant mortality rates
IpaB,C	Invasion plasmid antigens B,C
LFA	Leukocyte function-associated antigen
LGG	<i>Lactobacillus rhamnosus GG</i>
LIF	Leukocyte inhibitory factor
LNF-I	Lacto- <i>N</i> -fucopentaose I
LPS	Lipopolysaccharide
MALT	Mucosa-associated lymphoid tissue
MCP-1	Monocyte chemoattractant protein-1
M-CSF	Macrophage colony-stimulating factor

MDC	Macrophage-derived chemokine
MHC	Major histocompatibility complex
MIF	Migration inhibitory factor
MIP	Macrophage inflammatory protein
mRNA	Messenger ribonucleic acid
m-sCD14	Milk sCD14
NEC	Necrotizing enterocolitis
NIH	National Institutes of Health
NK	Natural killer cells
NV	Norwalk virus
O₂⁻	Superoxide anion
OPN	Osteopontin
OPV	Oral poliovirus vaccine
PAF	Platelet-activating factor
PAF-AH	Platelet-activating factor-acetylhydrolase
PARC	Pulmonary and activation-related chemokine
PBM	Peripheral blood macrophages
PBMNCs	Peripheral blood mononuclear cells
PMA	Phor-bol myristate acetate
PMNs	Polymorphonuclear leukocyte
PUFAs	Polyunsaturated fatty acids
RANTES	Regulated on activation, normal T cell expressed and secreted
RBC	Red blood cell
rhCD14	Recombinant human CD14

RSV	<i>Respiratory syncytial virus</i>
sCD14	Soluble CD14
SCF	Stem cell factor
sE-selectin	Soluble E-selectin
sICAM-1	Soluble intercellular adhesion molecule 1
sIgA	Secretory IgA
sIL-2R	Soluble interleukin 2 receptor
SIRS	Systemic inflammatory response syndrome
ST	Stable toxin
sTNF- α,RI	Soluble TNF- α , receptor I
sTNF- α,RII	Soluble TNF- α , receptor II
sVCAM-1	Soluble vascular cell adhesion molecule 1
TCRs	T-cell receptors
TGF-α	Transforming growth factor-alpha
TGF-β2	Transforming growth factor-beta 2
TGF-β_{1&2}	Transforming growth factor β _{1&2}
TNF- α	Tumour necrosis factor-alpha
Th1	T helper-1 lymphocytes
TIMP	Tissue inhibitor of metalloproteinase -
TLR2,4	Toll-like receptor 2,4
TNF- α	Tumor necrosis factor-alpha
VIP	Vasoactive peptide.
VLDL	Very low density lipoprotein

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