

**GLUTATHIONE AND ASSOCIATED
ANTIOXIDANT SYSTEM IN PROTEIN ENERGY
MALNUTRITION IN CHILDREN**

Thesis

Submitted for partial fulfillment of Master Degree in
Pediatrics

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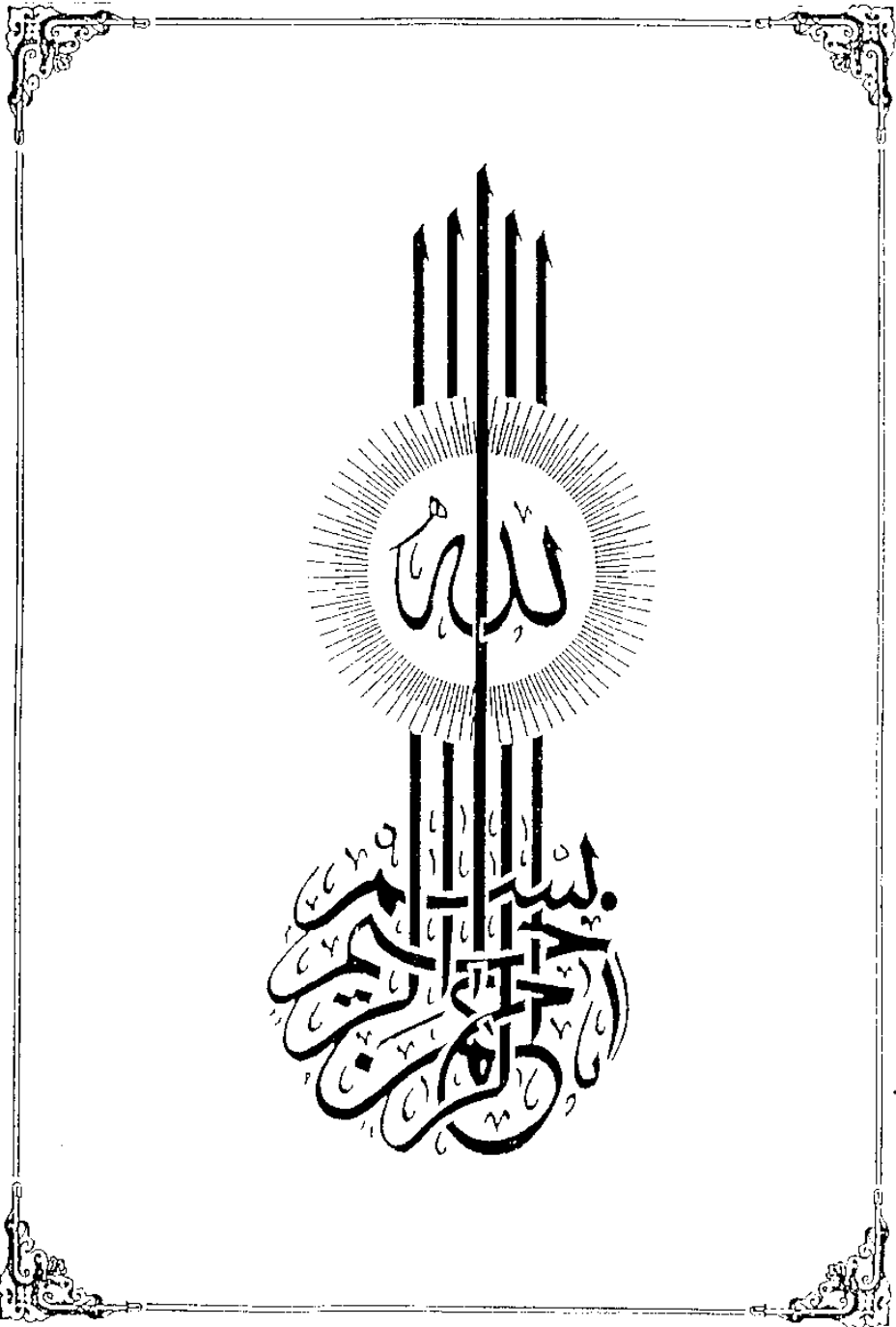
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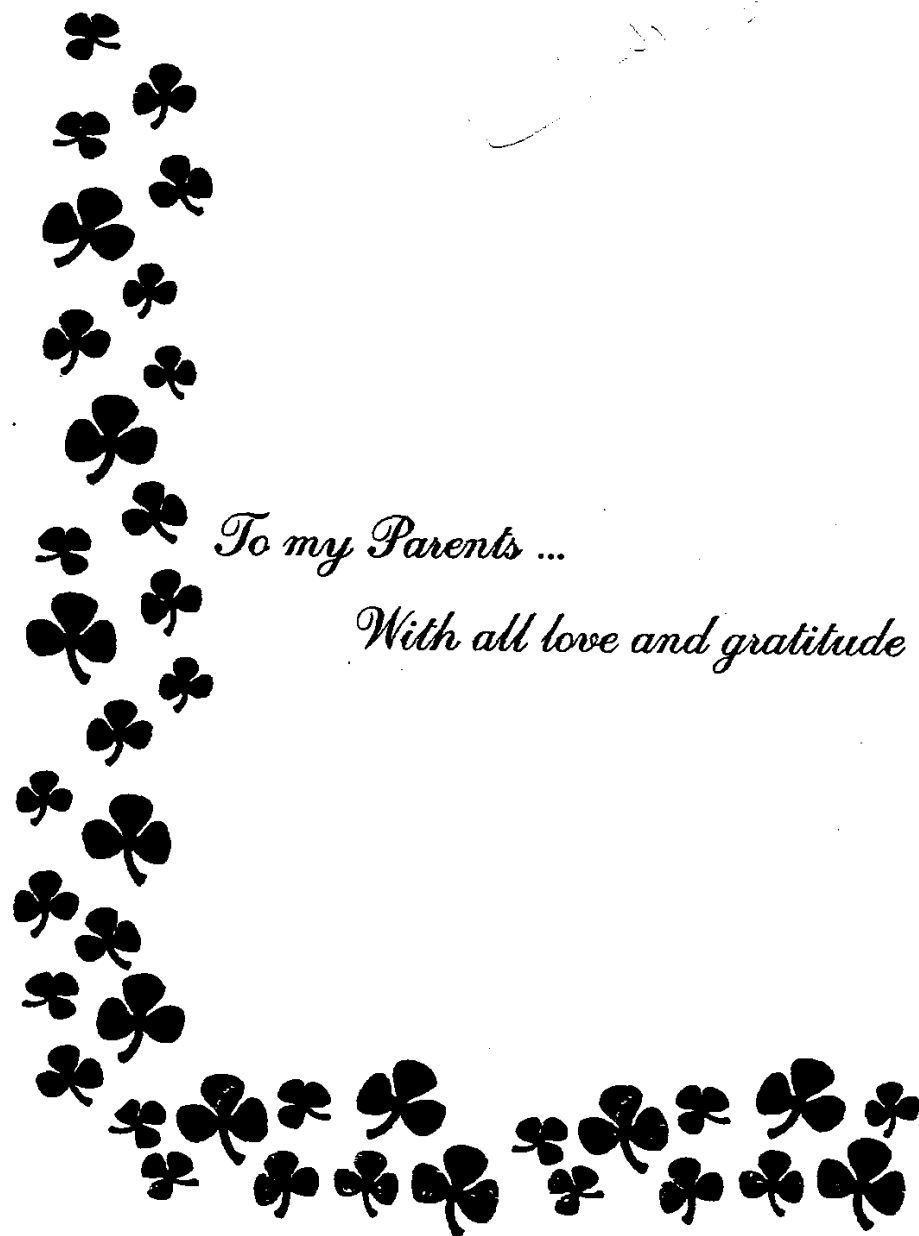
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To my Parents ...

With all love and gratitude

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List of Abbreviations

ADH	Antidiuretic hormone.
C₃	Complement 3
Cu	Copper.
DIC	Dissiminated intravascular coagulopathy.
Fe²⁺	Ferrous.
Fe³⁺	Ferric.
Gp	Glutathione peroxidase.
GR	Glutathione reductase
GSH	Reduced glutathione.
GSS G	Oxidized glutathione.
H₂O₂	Hydrogen peroxide.
HDL	High density lipoprotein.
IL-1	Interleukin-1.
Kwo	Kwashiorkor.
MKwo	Marasmic Kwashiorkor.
Mn	Manganese.
O₂[•]	Superoxide.
OH[•]	Hydroxyl radical.
PEM	Protein energy malnutrition.
PGE₂	Prostaglandin E ₂
ROS	Reactive oxygen species.
SOD	Superoxide dismutase.
TPN	Total parenteral nutrition.
Zn	Zinc.

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INTRODUCTION & AIM OF THE WORK

Introduction:

Marasmus and kwashiorkor are manifestations of protein energy malnutrition. The pathophysiology of these disorders is poorly understood (*Sive et al., 1993*).

Kwo may occur when an imbalance between pro- and anti-oxidants in malnourished children results in an excess of free radicals (*Becker et al., 1995*).

Aim of the work:

The aim of the present study is to investigate the disturbance in oxidant antioxidant balance in PEM by measuring the serum levels of glutathione peroxidase (GP) and glutathione reductase (GR) enzymes in infants suffering from marasmus and kwashiorkor.

