بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

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في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

LEARNING DISABILITIES IN CHILDREN WITH NEUROFIBROMATOSIS TYPE 1

THESIS

Submitted to the Faculty of Medicine

University of Alexandria

In Partial Fulfillment

Of The Requirements Of The Degree Of

DOCTOR OF NEUROLOGY

By

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To my family;

dear parents and wife & my lovely daughters

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INTRODUCTION

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The neurobiological pathways leading to serious cognitive disability and behavioral dysfunction in children often are obscured by etiological heterogeneity within the group of individuals being studied. Genetic and neurobiological heterogeneity in behaviorally defined disorders likely is a cause of dilution of or inconsistency in findings derived from groups of individuals with these conditions. Two important assumptions underlie behavioral neurogenetics research. The first assumption is that the complex pathway, beginning with one or more genetic factors affecting brain development or function and, ultimately, leading to behavioral or cognitive dysfunction, will be more accessible when studied in genetically homogeneous groups. The second assumption is that the information derived from such investigations will be directly relevant to our understanding of gene-brain-behavior associations in normal individuals [1].

Learning disabilities (LDs) are a heterogeneous group of disorders with variable etiologies.[2,3] This makes it hard, if not impossible, to any scientist who is trying to study brain-behavioral association in children with these disorders. However, neurofibromatosis 1 (NF-1) provide the scientists in the field of learning and its disorders with a unique model for research. First, it is a genetically homogeneous population; NF-1 is an autosomal dominant disorder in which the responsible gene and its protein product are well recognized. [4] Second, compared with an estimate frequency of 1-3% in the general population,[5] the frequency of LDs among children with NF-1 ranges from 29% to 37%.[6,7] On the other hand, NF-1 opens a new window

for research for those interested in understanding the neurobiological pathways through which particular genetic factors produce abnormalities in brain development and neurobehavioral function. This is a critical step in the eventual design of more specific intervention strategies.[1]

REVIEW OF LITERATURE