

بسم الله الرحمن الرحيم



-C-02-50-2-





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرونيلم





جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار







بالرسالة صفحات لم ترد بالأصل









Contribution of Molecular Cytogenetics in Gene Mapping of Band 22.1 on the Long Arm of Chromosome 16

Thesis

Submitted for partial fulfillment
of Master Degree in Basic Medical Sciences
(Histology)



By

Azza Abd El Moneim Attia

M.B.B.Ch., 1995

67.06 r

811.01816 A . A

Supervised by:

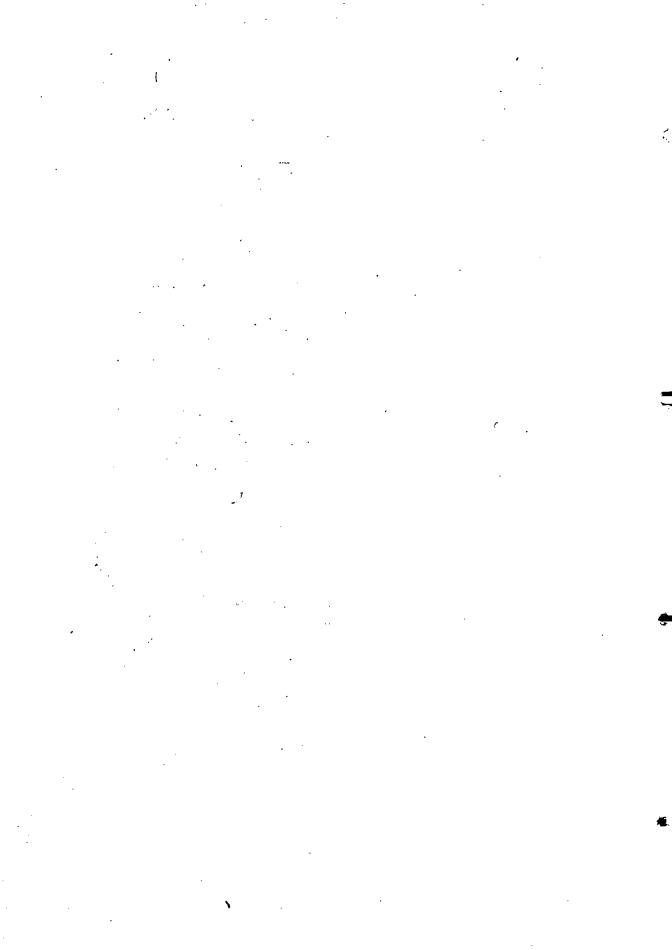
Prof. Dr. Esmat Zaki Geith

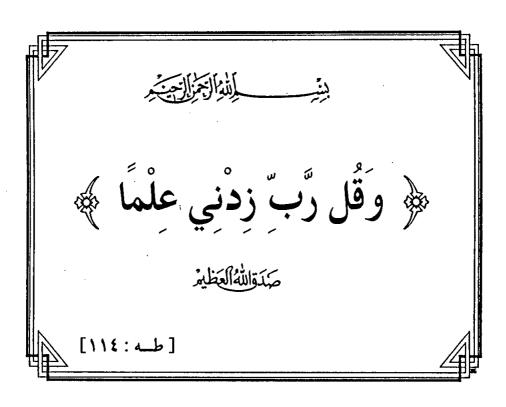
Prof. and Head of Histology Department
Faculty of Medicine
Ain Shams University

Dr. Laurence Taine

Ph.D. of Cytogenetics
Department of Medical Genetics
Hospital Centre of Bordeaux University

Faculty of Medicine Ain Shams University Cairo, 2000 Capplan .





. , .

ACKNOWLEDGMENT

THANKS TO GOD

I wish to express my deep gratitude and sincere appreciation to **Prof. Dr. Esmat Zaki Geith**, Professor of Histology, Faculty of Medicine, Ain Shams University, for her great support, her keen supervision, her helpful criticism and for scientific encouragement. She was also generous with her time.

I am particularly very grateful and appreciative for the keen supervision, guidance and endless help of **Dr. Laurence Taine**, Ph.D. of Cytogenetics, Hospital Centre of Bordeaux
University, France. I also thank her for suggesting this subject for me and for helping me in the practical as well as the theoretical parts of this work.

I would like to thank **Dr. Michel Longy**, Dr. Of Molecular Genetics and his team, **Françoise Dorion-Bonnet**, scientific doctor, **and Philipe Rocca-Serra**, scientific doctor, Institute of Bergonié, Bordeaux, France, for supplying us with the probes, as well as **Dr. McGrogan Gaetan**, Dr. of Histopathology at the same institute, for supplying us with the slides of cancer breast, and **Dr. Jean Hugue Faufingue**, assistant of Cytogenetics, Hospital Centre of Bordeaux University, for helping me in the practical part of this work.

I am also grateful to all my **Professors**, **Colleagues** and **Technicians** of the Cytogenetic department, Hospital Centre of Bordeaux University.

Last and not least, I have a special debt to my family, especially to my mother who helped me and supported me a lot.

6

·

CONTENTS

| INTRODUCTION | 1 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| REVIEW OF LITERATURE | 4 |
| Classical cytogenetics | 4 |
| Molecular cytogenetics | 20 |
| Gene manning and Human Genome Project - | 35 |
| Cancer | 37 |
| MATERIAL AND METHODS | 54 |
| A Comment of the Comm | 54 |
| Methods | 59 |
| RESULTS | 73 |
| DISCUSSION | - 110 |
| SUMMARY AND CONCLUSION | - 120 |
| ABSTACT | 125 |
| REFERENCES | _ 126 |
| ARABIC SUMMARY | |

.

.

.

•

ACKNOWLEDGMENT

THANKS TO GOD

I wish to express my deep gratitude and sincere appreciation to **Prof. Dr. Esmat Zaki Geith**, Professor of Histology, Faculty of Medicine, Ain Shams University, for her great support, her keen supervision, her helpful criticism and for scientific encouragement. She was also generous with her time.

I am particularly very grateful and appreciative for the keen supervision, guidance and endless help of **Dr. Laurence Taine**, Ph.D. of Cytogenetics, Hospital Centre of Bordeaux University, France. I also thank her for suggesting this subject for me and for helping me in the practical as well as the theoretical parts of this work.

I would like to thank Dr. Michel Longy, Dr. Of Molecular Genetics and his team, Françoise Dorion-Bonnet, scientific doctor, and Philipe Rocca-Serra, scientific doctor, Institute of Bergonié, Bordeaux, France, for supplying us with the probes, as well as Dr. McGrogan Gaetan, Dr. of Histopathology at the same institute, for supplying us with the slides of cancer breast, and Dr. Jean Hugue Faufingue, assistant of Cytogenetics, Hospital Centre of Bordeaux University, for helping me in the practical part of this work.

I am also grateful to all my **Professors**, **Colleagues** and **Technicians** of the Cytogenetic department, Hospital Centre of Bordeaux University.

Last and not least, I have a special debt to my family, especially to my mother who helped me and supported me a lot.