

# **Molecular Biochemical Study of Certain DNA Repair Mechanisms and their Relation to Cancer**

Thesis Submitted for the Degree of PhD in pharmaceutical Sciences  
(Biochemistry)

By

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

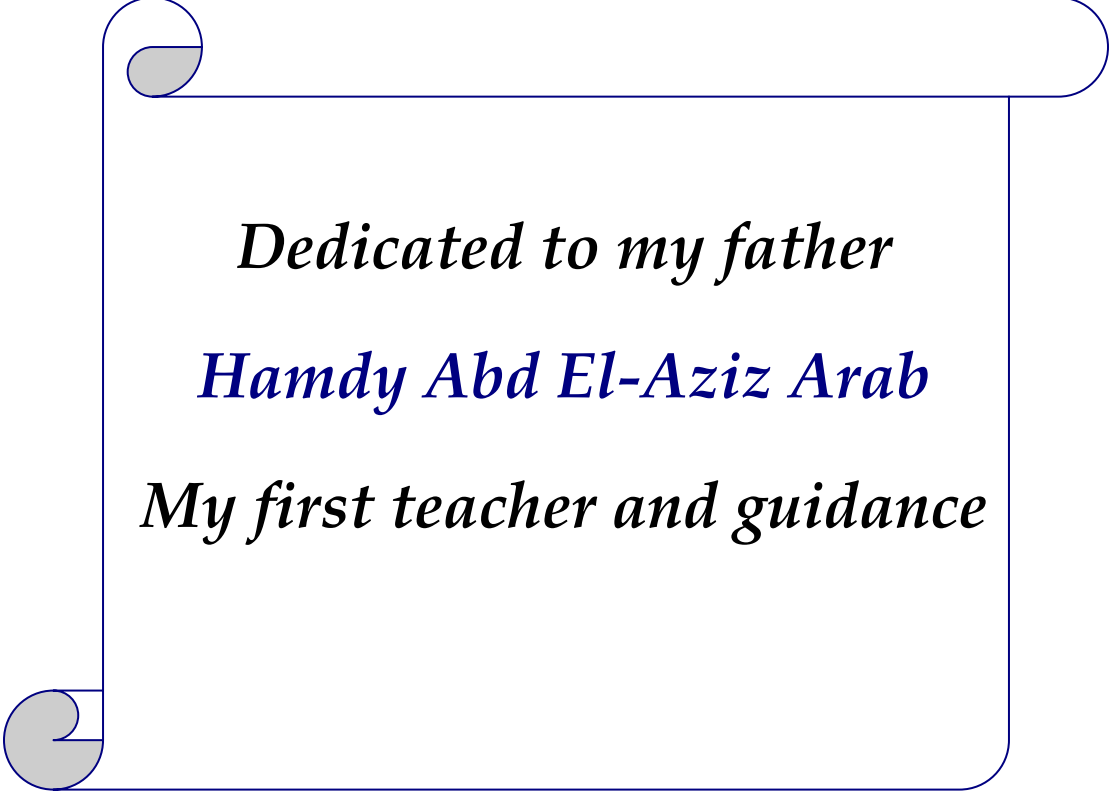
“قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا

مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ

الْحَكِيمُ”

صَدَقَ اللَّهُ الْعَظِيمُ

(البقرة ٣٢)



*Dedicated to my father*

*Hamdy Abd El-Aziz Arab*

*My first teacher and guidance*

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# Contents

<i>Subject</i>	<i>Page</i>
<i>List of Tables.....</i>	<i>iii</i>
<i>List of Figures.....</i>	<i>v</i>
<i>List of Abbreviations.....</i>	<i>x</i>
<i>Literature Review</i>	
- Nucleotide excision repair (NER) .....	1
• Molecular mechanism of global genomic-nucleotide excision repair (GG-NER).....	14
• Transcription-Coupled Nucleotide Excision Repair (TC-NER) ..	38
- Transcription factor IIIH (TFIIH).....	42
- Biological roles of Xeroderma Pigmentosum protein G (XPG). ....	48
- Translesion DNA synthesis .....	57
- Nucleotide excision repair and skin cancer .....	60
- Therapy Prospects of NER associated diseases .....	63
<i>Aim of the Work.....</i>	<i>68</i>
<i>Material and Methods</i>	
• <i>Material.....</i>	<i>70</i>
• <i>Experimental Design .....</i>	<i>75</i>
• <i>Methods .....</i>	<i>84</i>
I. UV irradiation.....	84
II. Indirect immunofluorescence.....	85
VII. Protein quantitation	88
VIII. Gel electrophoresis and immuno-blot analysis of proteins (Western blot).....	91
III. Immunoprecipitation (IP).....	96
IV. Chromatin immunoprecipitation(ChIP) .....	98
V. Fluorimetric DNA quantitation.....	101
a. Picogreen assay.....	101
b. Hoechst dye assay.....	104

VI. Immuno-slot blot analysis.....	107
IX. Host cell reactivation assay.....	109
a. Transforming competent E.coli cells .....	110
b. Plasmid purification .....	112
c. Transfection of HCT116-cdk7 <sup>as/as</sup> cells with pCMV-Tag 2 Vector .....	115
d. Luciferase Assay .....	117
X. Reverse transcriptase- polymerase chain reaction (RT-PCR) .....	119
a. RNA purification .....	120
b. Reverse transcriptase reaction .....	123
c. Polymerase chain reaction .....	125
XI. Statistical Analysis.....	127
<b>Results</b> .....	128
<b>Discussion</b> .....	194
<b>Summary and conclusions</b> .....	213
<b>References</b> .....	217
<b>Appendix</b>	
<b>Arabic summary</b>	

## List of Tables

Table	Page
1. Chemicals used in the study .....	72
2. Kits used in the study .....	73
3. Composition of nutrient media and buffers used in the study.....	74
4. Reagent preparation for protein quantitation .....	89
5. Effective range of SDS-polyacrylamide gels for protein separation .....	95
6. Preparation of 5% stacking gel for SDS-PAGE .....	95
7. Preparation of resolving gel for SDS-PAGE .....	95
8. DNA quantitation using Picogreen assay .....	102
9. DNA quantitation using Hoechst assay .....	105
10. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 0.1 hour post local UV irradiation .....	143
11. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 0.5 hour post local UV irradiation .....	150
12. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 24 hours post local UV irradiation .....	157
13. Quantitation of the genomic removal of CPD upon Cdk7 inhibition .....	173
14. Quantitation of the genomic removal of 6-4PP upon Cdk7 inhibition .....	176
15. Quantitation of XPC, TFIIH, XPA and XPG recruitment to the damage sites upon Cdk7 inhibition .....	182
16. Effect of CAK inhibition on transcription recovery and transcription-coupled repair following UV-induced DNA damage .....	188



Table	Page
17. Quantitation of RT-PCR specific bands of p53, p21 and DDB2 genes .....	192
18-42. Appendix	

## List of Figures

Figure	Page
1. Nucleotide excision repair .....	2
2. Nucleotide excision repair and unscheduled DNA synthesis assay .....	4
3. Skin and eye involvement in Xeroderma Pigmentosum .....	6
4. Patient with XP-G/CS complex .....	8
5. Clinical appearance of XP, XP/TTD, and TTD patients and polarizing microscopic examination of their hair .....	10
6. Ultraviolet photoproducts of thymine dimer in DNA .....	12
7. Fluorescence photobleaching techniques used in NER studies .....	15
8. Model of the NER mechanism .....	17
9. Colocalization of NER proteins with the sites of UV damage.	19
10. NER protein interactions .....	22
11. Model for the coordination of dual incision and repair synthesis steps in NER .....	28
12. Model for NER in the context of chromatin .....	30
13. The process of ubiquitylation .....	34
14. DDB1 complex .....	36
15. Potential outcomes following RNAPII arrest .....	39
16. Suggested scenario for initiation of repair through TCR .....	41
17. Structure of TFIIH protein and summary of its functions .....	43
18. Effect of transcription factor II H mutations on transcription	46

Figure	Page
19. Mutations affecting TFIIH subunits might affect interactions with specific transcription factors .....	47
20. Functional domains of the XPG protein .....	49
21. Known alleles of XP-G patients .....	53
22. Mutations affecting TFIIH subunits might affect interactions with specific transcription factors .....	59
23. Protection of XP children from UV-exposure .....	64
24. Schematic presentation of direct versus indirect immunofluorescence technique .....	85
25. Local UV irradiation combined with indirect immunofluorescence staining of cells .....	86
26. Standard curve of bovine serum albumin .....	90
27. Outline of Western blotting of proteins .....	92
28. Outline of immunoprecipitation technique .....	96
29. Outline of chromatin immunoprecipitation (ChIP) technique .....	99
30. Standard curve of double stranded calf thymus DNA using Picogreen reagent .....	103
31. Standard curve of double stranded calf thymus DNA using Hoechst dye .....	106
32. Outline of plasmid DNA purification procedure .....	114
33. General lipid design and proposed mechanism for DNA entry into cells .....	115
34. Luminescent reaction catalyzed by firefly luciferase .....	117
35. Outline of the RNA purification procedure .....	122

Figure	Page
36. <i>In vivo</i> recruitment of TFIIH to DNA damage sites in NER-proficient HeLa cells .....	130
37. Association between core TFIIH and CAK complex in HeLa cells .....	132
38. Immunoblot analysis of ChIP-recovered DNA in HeLa cells .....	134
39. Schematic representation of wild-type and mutant XPG proteins expressed in XPCS1LV, XPCS2LV and XP3BR fibroblasts .....	138
40. Recruitment of XPC and the core TFIIH p62 protein to DNA damage sites at 0.1 hour following UV irradiation .....	139
41. Recruitment of XPG and the core TFIIH XPB protein to DNA damage sites at 0.1 hour following UV irradiation .....	140
42. Recruitment of the CAK complex MAT1 and the core TFIIH p62 proteins to DNA damage sites at 0.1 hour following UV irradiation .....	141
43. Recruitment of the core TFIIH XPD and p62 proteins to DNA damage sites at 0.1 hour following UV irradiation .....	142
44. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 0.1 hour post local UV irradiation .....	144
45. Recruitment of XPC and the core TFIIH p62 protein to DNA damage sites at 0.5 hour following UV irradiation .....	146
46. Recruitment of XPG and the core TFIIH XPB protein to DNA damage sites at 0.5 hour following UV irradiation .....	147
47. Recruitment of the CAK complex MAT1 and the core TFIIH p62 proteins to DNA damage sites at 0.5 hour following UV irradiation .....	148
48. Recruitment of the core TFIIH XPD and p62 proteins to DNA damage sites at 0.5 hour following UV irradiation .....	149

Figure	Page
49. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 0.5 hour post local UV irradiation .....	151
50. Recruitment of XPC and the core TFIIH p62 protein to DNA damage sites at 24 hour following UV irradiation .....	153
51. Recruitment of XPG and the core TFIIH XPB protein to DNA damage sites at 24 hour following UV irradiation .....	154
52. Recruitment of the CAK complex MAT1 and the core TFIIH p62 proteins to DNA damage sites at 24 hour following UV irradiation .....	155
53. Recruitment of the core TFIIH XPD and p62 proteins to DNA damage sites at 24 hour following UV irradiation .....	156
54. Quantitation of TFIIH and XPG recruitment to DNA damage sites at 24 hour post UV local irradiation .....	158
55. The association between CAK complex and core TFIIH in repair-proficient NHF .....	160
56. The association between CAK complex and core TFIIH in XPCS1LV cells .....	161
57. The association between CAK complex and core TFIIH in XPCS2LV cells .....	162
58. The association between CAK complex and core TFIIH in XP3BR cells .....	163
59. The association between CAK complex and core TFIIH in XPG-corrected XP3BR cells .....	164
60. Enrichment of UV-induced photolesions by anti-XPB and anti-Cdk7 ChIP in XP3BR and XPG cDNA-corrected XP3BR cells .....	166
61. UV-induced photolesions in anti-XPB and anti-Cdk7 ChIP-recovered DNA in HeLa, XP3BR and XPG cDNA-corrected XP3BR cells .....	167

Figure	Page
62. The chemical structure of 1-NMPP1 .....	170
63. Effect of 1-NMPP1 treatment on Cdk7 kinase activity in HCT116-Cdk7 <sup>+/+</sup> and HCT116-Cdk7 <sup>as/as</sup> cells .....	171
64. Effect of CAK inhibition on the removal of CPD from the genome .....	172
65. Quantitation of the genomic removal of CPD upon CAK inhibition .....	174
66. Effect of CAK inhibition on the removal of 6-4PP from the genome .....	175
67. Quantitation of the genomic removal of 6-4PP upon CAK inhibition .....	177
68. Effect of CAK inhibition on the recruitment of XPC and XPA to DNA damage sites .....	179
69. Effect of CAK inhibition on the recruitment of TFIIH XPB and XPG to DNA damage sites .....	180
70. Effect of CAK inhibition on the recruitment of TFIIH p62 and MAT1 to DNA damage sites .....	181
71. Quantitation of the recruitment of XPC, TFIIH, XPA and XPG to the damage sites upon Cdk7 inhibition .....	183
72. Effect of Cdk7 kinase inhibition on the phosphorylation of RNAP II (P-Ser5) .....	186
73. Effect of CAK inhibition on transcription recovery and transcription- coupled repair following UV-induced DNA damage .....	189
74. Effect of Cdk7 inhibition on transcription of p53, p21, DDB2 and GAPDH genes .....	191
75. Quantitation of RT-PCR specific bands of p53, p21 and DDB2 genes .....	193

## List of Abbreviations

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<b>1-NMPP1</b>	4-Amino-1-tert-butyl-3-(1'-naphthylmethyl)pyrazolo[3,4-d]pyrimidine
<b>6-4PP</b>	6-4 pyrimidine-pyrimidone photoproducts
<b>ACF</b>	ATP-utilizing chromatin assembly and remodeling factor
<b>BCC</b>	Basal cell carcinomas
<b>CAF-1</b>	Chromatin assembly factor 1
<b>CAK</b>	Cyclin-dependent kinase activating kinase
<b>Cdk7</b>	Cyclin-dependent kinase 7
<b>Cdk9</b>	Cyclin-dependent kinase 9
<b>cDNA</b>	Complementary DNA
<b>ChIP</b>	Chromatin immunoprecipitation
<b>COP9</b>	Constitutive photomorphogenesis protein 9
<b>CPD</b>	Cyclobutane pyrimidine dimer
<b>CS</b>	Cockayne syndrome
<b>CSA</b>	Cockayne syndrome protein A
<b>CSB</b>	Cockayne syndrome protein B
<b>CSN</b>	Constitutive photomorphogenesis protein 9 signalosome
<b>CTD</b>	Carboxyl terminal domain
<b>Cul4A</b>	Cullin 4A
<b>DAGI</b>	Donkey anti-goat immunoglobulin
<b>DAPI</b>	4', 6'-diamidino-2-phenylindole
<b>DDB</b>	Damaged DNA binding protein