

**CLONING AND CHARACTERIZATION OF AZURIN
GENE FROM *PSEUDOMONAS AERUGINOSA***

A Thesis

Presented to

Cairo University

By

Howayada Mahany Mostafa

M. Sc. in Biochemistry

Faculty of Science, Cairo University, 2007

For

The Degree of Philosophy Doctorate (Ph.D. in Chemistry)

(Bio Chemistry)

2009

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Cloning and characterization of azurin gene from *Pseudomonas aeruginosa*

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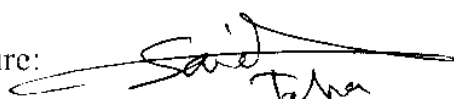
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ABSTRACT

Name : Howayada Mahany Mostafa

Title of thesis: Cloning and characterization of azurin gene from *Pseudomonas aeruginosa*.

Degree : Ph.D. degree in science.

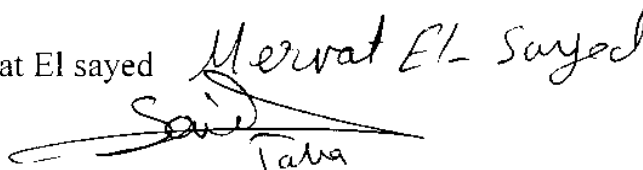
This work has been carried out to investigate the cloning and characterization of azurin gene, *Pseudomonas aeruginosa* was isolated and identified which produce azurin gene. Azurin was cloned in pEM®-T easy vector, Then the gene was subcloned into the *E. coli* overexpression vector pET-28a. The SDS PAGE analysis showed that the gene was overexpressed in *E. coli*. The recombinant protein was purified by one-step purification using Ni⁺⁺ resin. The antitumor effect of azurin was examined and detected by enters different cancer cells selectively, but not in any of the normal cell tested. This recombinant protein could potentially be used as a vehicle for cancer-targeted chemotherapy

Key words: *Pseudomonas aeruginosa*, azurin gene, cloning in *E.coli* .

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Acknowledgement

This work would not have been possible without the help of many people.

*First, I wish to express my deepest gratitude and my great respect to my supervisor Assistant Prof. **Dr. Mervat El Sayed**, Associate Professor of Biochemistry, Faculty of Science, Cairo University for her help in the research point and her deep insights and illuminating comments that made this work possible. Her supervision for this thesis is a real proud for me.*

I wish to express my profound gratitude to my supervisor

***Dr. Said Abdel Fattah**, Lecturer of Biophysics, Faculty of Science, Cairo University, who showed me the rest of the way and supported me to accomplish this work successfully.*

I would like also to thank my colleagues in Biochemistry laboratory, Faculty of Science, Cairo University for their help.

I am deeply grateful to my loving parents my lovely mother, my great father, to whom I am very much indebted and will be forever.

*Words can't express my deep emotions for my soul mate **Khaled**, Who empowered me to finish this work through his love, Care and encouragement.*

Finally, I appreciate very much the moral support I got from my dear sisters and my brother.

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