سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

سامية محمد مصطفى

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 بعيدا عن الغبار

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

سامية محمد مصطفى

شبكة المعلومات الجامعية

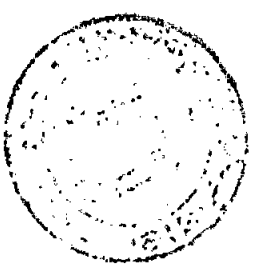
بالرسالة صفحات لم ترد بالأصل

Genetic Characterization of Giant Clams *Tridacna spp. (Bivalvia: Tridacnidae)* from the Red Sea

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Pharmaceutical Sciences
(Biochemistry)

By:
Naglaa Mohamed Abd El-Salam Saad
B. Pharm. Sci., Suez Canal University 1999

Department of Biochemistry
Faculty of Pharmacy
Suez Canal University
Egypt
2003



Approval Sheet

The thesis is approved by:

Prof. Dr. Adel A. Khair El Din

Prof. Dr. Mohamed Z. Gad

Prof. Dr. Soad H. Abou-El-Ela

Assistant Prof. Sherief I. Khalifa

Supervision Committee

Dr. Soad H. Abou-El-Ela
Professor of Biochemistry
Faculty of Pharmacy
Suez Canal University

Dr. Sherief I. Khalifa
Associate professor of Pharmacognosy
Faculty of Pharmacy
Suez Canal University

Dr. Raouf W. Kilada
Associate professor of Marine Science
Faculty of Science
Suez Canal University

Author	Naglaa Mohamed Abd El Salam Saad Mohamed
Title	Genetic Characterization of Giant Clams *Tridacna spp. (Bivalvia: Tridacnidae)* from the Red Sea
Faculty	Pharmacy
Department	Biochemistry
Location	Ismailia
Degree	M. Pharm. Sci.
Date	May, 2003
Language	English
Supervision Committee	Dr. Soad H. Abou-El-Ela- Dr. Sherief I. Khalifa- Dr. Raouf W. Kilada

English Abstract

Morphologically, two species of giant clams *Tridacna* have been recognized in the Red Sea, *T. squamosa* and *T. maxima*. Similar morphology among species makes classification difficult. For a more precise classification, we sequenced 450-nucleotide fragment of the mitochondrial 16S rDNA gene from the tissues of *Tridacna* individuals collected from eight locations in the northern Red Sea.

Our results suggest that there are three novel species of *Tridacna* in the Red Sea. Two of these species are related to *T. maxima* and one is related to *T. squamosa*. Of the two species related to *T. maxima*, one species was found in Hurghada, Marsa Ghaleb and Safaga while the other was found in Abu Zenima, Abou Galum, Dahab and Nuweiba. All three novel species were found in Ras Mohamed. Our results do not support the morphological classification that suggests the existence of only two tridacnid species, *T. maxima* and *T. squamosa* in the Red Sea.

Key Words	*Tridacna*, Mitochondrial DNA, 16S rDNA, PCR, Red Sea

ACKNOWLEDGEMENTS

I wish to express my deep appreciation to Dr. Soad H. Abou-El-Ela, Vice Dean and Professor of Biochemistry, Faculty of Pharmacy, Suez Canal University for her continuous guidance, advice and support.

Sincere gratitude is due to Dr. Sherief I. Khalifa, Associate Professor of Pharmcognosy, Faculty of Pharmacy, Suez Canal University for his support and continuous encouragement.

I am greatly indebted to Dr. Raouf W. Kilada, Associate Professor of Marine Science, Faculty of Science, Suez Canal University for his valuable support, help and constructive suggestions during the preparation of this work.

I would like also to express my gratitude to Dr. Mostafa Mesbah, Dean and Professor of Pharmcognosy, Faculty of Pharmacy, Suez Canal University for his help in executing this work.

Thanks are also due to Mr. Osama M. Wahba for his active participation and effort in collecting the samples.

I am grateful to Dr. Russell T. Hill, Associate Professor, Center of Marine Biotechnology (COMB), University of Maryland, USA, for his guidance and help in analysis of the results during my three-month training fellowship in his lab.

I would like to thank the Egyptian Academy of Scientific Research Program of the National Strategy for Biotechnology and Genetic Engineering (project code: 31), for the financial assistance.