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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية



بالرسالة صفحات

لم ترد بالأصل

A THESIS ENTITLED

**PREPARATION OF  
*HAEMOPHILUS INFLUENZAE* TYPE B  
CAPSULAR POLYSACCHARIDE  
CONJUGATE VACCINE**

By  
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M.SC. BIOCHEMISTRY**

**SUBMITTED FOR  
THE DEGREE OF PH. D. OF SCIENCE  
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Title of ( Ph.D.) Thesis:

PREPARATION OF HAEMOPHILUS INFLUENZAE TYPE B  
CAPSULAR POLYSACCHARIDE CONJUGATE VACCINE

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## ABSTRACT

Name: Alaa Eldin Shehata Aly Mohamad

Title of thesis:

### PREPARATION OF HAEMOPHILUS INFLUENZAE TYPE B CAPSULAR POLYSACCHARIDE CONJUGATE VACCINE

Degree: Ph. D. Thesis, Faculty of Science - Cairo University, 1999/2000.

A conjugate vaccine was prepared from the capsular polysaccharide (CPS) of *Haemophilus influenzae* type b (Hib) and tetanus toxoid (TT) as a carrier protein. The polysaccharide was prepared, hydrolyzed, fractionated and an oligosaccharide fraction was collected oxidized and coupled chemically to 150 kDa fraction of TT by reductive amination. The ratio of carbohydrate to protein in the conjugate was found 0.1: 1. The conjugate was tested in mice and was found to improve the immune response towards Hib CPS with boosting effect. The conjugate was found to elicit a level of immune response in mice similar to that obtained by three licensed Hib conjugate vaccines.

Key words: Conjugate, Vaccine, Capsular polysaccharide, *Haemophilus influenzae* type b

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*Alaa Eldin Shehata*

## List Of Abbreviations

$\mu\text{g}$	Microgram
$\mu\text{l}$	Micro liter
$\mu\text{m}$	Micrometer
Abs	Absorbance
ADH	Adipic acid dihydrazide
BSA	Bovine serum albumin
CDC	Center For Diseases Control
CDI	Carbodiimidazole
cm	Centimeter
Conc	Concentrated
CPS	Capsular polysaccharide
CRM <sub>197</sub>	Cross reactive mutant diphtheria toxoid
d H <sub>2</sub> O	Distilled water
DAEC	1-(3-dimethylaminopropyl)-3-ethylcarbodiimide
DMF	Dimethylformamide
DTT	Dithiothreitol
ELISA	Enzyme linked immuno sorbent assay
Fig	Figure
g	Gram
Gp	Group
Hib	<i>Haemophilus influenzae</i> type b
Im	Imidazole
k Da	Kilo Dalton
K <sub>av</sub>	Distribution coefficient
kg	Kilogram
l	Liter
M	Mole