

## CURRICULUM VITAE

**Name** : Alaa Yehya Mohammed Ali Al-Bakir  
**Place & Date of Birth** : Hilla, Iraq – 19/10/1949  
**Nationality** : Iraqi  
**Status** : Married with two children

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Al Foah Company L.L.C.  
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### EDUCATIONAL QUALIFICATIONS

- 1. Ph.D. in Agricultural Chemistry (Enzymology),  
University of California, Davis, USA - 1978**
- 2. M.Sc. in Food Science and Technology,  
University of California, Davis, USA – 1974**
- 3. B.Sc. in Food Science and Technology,  
University of Baghdad, Iraq - 1971**

### RESEARCH INTERESTS

1. Utilization of date palms in advanced transformational and biotechnology processes including solid state fermentations to obtain valuable food and industrial products.
2. Production, purification and immobilization of enzymes for industrial, analytical and genetic engineering applications.
3. Development of advanced technologies for the utilization of agricultural by-products (animal and plant) to produce economically significant materials.

### WORK EXPERIENCE

- Aug 2005 – Present** : Research & Development Department Chriman,  
in Al Foah L.L.C. Company, **Al Ain, UAE.**
- July 2004 – July 2005** : Executive Manager , Al-Zaab Trading Co. , Dubai ,  
UAE , ( Trade and Consultations )
- Feb 2002 – April 2004** : Operation Manager, Al Marfa Factory for  
Processing and Packing of Vegetables and Dates,  
Al Marfa, Abu Dhabi, UAE

- May 2000 – July 2004** : Chairman of Quality Control Dept., Al Marfa Factory for Processing and Packing of Vegetables and Dates, Al Marfa, Abu Dhabi, UAE
- July 1999 – April 2000** : Assistant Professor at the Institute of Genetic Engineering and Biotechnology for Post Graduate Studies, University of Baghdad, Iraq
- Jan. 1992 – June 1999** : Assistant Professor at the Dept. of Biotechnology for Post Graduate Studies, College of Science University of Baghdad, Iraq & Vice Chairman of Dept. of Biotechnology
- Jan. 1990 – Dec. 1991** : Senior Researcher, Ministry of Industry, Iraq
- Aug. 1987 – Dec. 1989** : Chairman of the Dept. of Palms and Dates/ Agriculture and Water Resources Research Centre, Scientific Research Council, Iraq
- Feb. 1986 – Aug. 1987** : Chairman of the Planning Section, Agriculture and Water Resources Research Centre, Scientific Research Council, Iraq
- Sep. 1985 – Feb. 1986** : Coordinator of Scientific Affairs/Agriculture and Water Resources Research Centre, Scientific Research Council, Iraq
- April-June 1979** : Lecturer at the College of Agriculture, University of Basrah, Iraq
- Jan. 1982 – Nov. 1984** : Assistant Dean for Scientific Affairs, College of Agriculture, University of Basrah, Iraq

#### **INTERNATIONAL ORGANIZATIONS**

1. Member of the American Chemical Society since 1976
2. Coordinator of the Regional Date Palm Research Centre GCP/REM/050/FAD(FAO-AFESD supported Project) 1989
3. Consultant for AGON/FAO HQ: June 25-July 01/1989
4. Consultant for AGON/FAO HQ Rome: April 19 to 7<sup>th</sup> May 1990
5. Member in the Editorial Board of the “Date Palm Journal” (FAO Publication) 1988 – 1989

## AWARDS

1- State Award for the research team working on “Biz Fish in Biotechnology 1994”.

2 Ministry of Higher Education Award for the project “Extraction and Characterization of *Hind III* Isoschizomer from locally isolated ***Haemophilus influenzae***”.

## PATENTS

1. Iraqi Patent No. 2730 on 25/08/1998:  
**Preparation of Hemin Substitute**  
(International Classification: C12N1/00)
2. Iraqi Patent No. 2824 on 24/04/2000:  
**Development of a New Solid Support for the Preparation of ELISA Based Diagnostic Kits**  
(International Classification: A61K39/385; G01N33/50)
3. Iraqi Patent No. 2915 on 27/06/2001:  
**Production of Microbial Rennet from a Local Isolate of *Rhizomucor miehei* M0-45 using Local Substitute**  
(International Classification: C12N9/50)

## PUBLISHED PAPERS

1. Purification and characterization of invertase from dates (*Phoenix dactylifera* L. Var. Zahdi) J. Food Biochem 2, (1978).
2. Occurrence and stability of trypsin inhibitors in Iraqi local legumes J. Agric Food Chem. 30, (1982).
3. Oxalic Acid content of some common Iraqi vegetables. Iraqi J. Agric Sci. “Zanco”. 2 (3). (1984).
4. Purification and immobilization of *Rhizopus arrhizus* polygalacturonase. Proc. 4<sup>th</sup> Sci. Conf. Sci. Res. Council, Vol. 1, part 3, (1986).
5. Production of *Rhizopus arrhizus* polygalacturonase using date juice. 4<sup>th</sup> Sci. Conf. Sci. Res. Council, Vol. 1, part 3, (1986).
6. Effect of cultural conditions on the production of polygalacturonase from *Rhizopus arrhizus*. Iraqi J. Agric. Sci. “Zanco”, 5, (1) (1987).
7. Evaluation of some commercial pectinases. J. Agric. Water Reso. Res. 6 (2), (1987).
8. Screening of fungal strains for polygalacturonase production. J. Agric. Water Reso. Res. 6 (2), (1987).

9. Effect of covering of Zahdi dates on invertase, polygalacturonase and cellulase activity. J. Agric. Water Reso. Res. 7 (1), (1988).
10.  $\beta$  - Galactosidase: a new enzyme associated with maturation of Zahdi dates. J. Agric. Water Reso. Res. 7 (1), (1988).
11. Optimum cultural conditions for *Mucor pusillus* polygalacturonase production. J. Agric. Water Reso. Res. 7 (1), (1988).
12. Effect of fermenter conditions on the production of *Rhizopus arrhizus* polygalacturonase J. Agric. Water Reso. Res. 8 (1), (1989).
13. Seasonal changes in auxin content and some oxidative enzymes activity of in vitro cultured date palm tissues J. Agric. Water Reso. Res. 8 (1), (1989).
14. Some changes in medium constituents of date palm tissue culture, J. Agric. Water Reso. Res. 8 (1), (1989).
15. The role of polygalacturonase in soft rot of squash (*Cucurbita pepo*) caused by the fungus *Rhizopus stolonifer*, J. Agric. Sci. 6, (1988).
16. Polyphenol oxidase from Barhee and Zahdi dates. I. Purification, J. Food Biochem., 12 (1989).
17. Polyphenol oxidase from Barhee and Zahdi dates. II. Characterization, J. Food Biochem., 12 (1989).
18. Purification and determination of some basic characteristics of polygalacturonase produced by *Mucor pusillus*. Proc. 5<sup>th</sup> Sci. Conf. SRC. Vol. 1, part 4, (1989).
19. The use of ethylene gas in ripening of date palm fruits (Zahdi cultivar). Proc. 5<sup>th</sup> Sci. Conf. SRC. Vol. 1, part 4, (1989).
20. Inhibition of browning enzymes activity *in Vitro* cultured date palm tissues. J. of Saharian Studies, Vol. 1, No. 1 (1991).
21. Production of hemoglobin tonic and folic acid from natural sources. Iraqi J. Agric. Sci. Vol. 25, No. 1 (1994).
22. Production of citric acid by submerged and solid state fermentations. Iraqi J. Microbial, Vol. 6 (2) (1994).
23. Extraction and comparison of outer membrane proteins isolated from four strains of *Brucella melitensis* and *Brucella abortus*. Iraqi J. Microbial, Vol. 6 (2) (1994).
24. Screening for endonucleases among clinical isolates of *Staphylococcus aureus*. Iraqi J. Microbial, Vol. 6:11 (1994).

25. Peroxidase isozymes in turnip roots (*Brassica rapa* L., local cultivar) Iraqi J. Sci. (1997).
26. Cellulase production by fungi isolated from date palms. . Iraqi J. Microbial, (1997).
27. Bacterial expression of recombinant growth hormone from *B. escoinus* . Dirasat 24:130 (1997).
28. Immobilization techniques of cells and biocatalysts. Proceedings of Workshop of Recent Techniques in Biotechnology (1997).
29. Advances in chromatographic techniques for protein purification. Proc. of Workshop of Recent Techniques in Biotechnology (1997).
30. Optimization of *Aspergillus oryzae* alkaline protease production by solid state fermentation. Iraqi J. Microbial, Vol. 10 (1) (1998).
31. Purification and characterization of a new antigen from bovine spleen for diagnosis of systemic lupus erythematosus. Ibn Al-Haitham J. for Pure and Applied Sci., Vol. 13 (2) (2000).
32. Development of a new solid support for ELISA applications. Ibn Al-Haitham J. for Pure and Applied Sci., Vol. 13 (2) (2000).
33. Effect of antibiotics on the production of extracellular protein A by locally isolated, methicillin resistant *Staphylococci*. Biotech. Res. J. Vol. 2 (1) (2000).
34. Prospects of dates and date palms in Biotechnology. The 2<sup>nd</sup> International Conference on dates and dates palms (2001).
35. *Mucor pusillus* polygalactaronase. I. Purification from solid state fermentation cultures. The 1<sup>st</sup> International Conference on Food Systems (2003).
36. Scopes of Biotechnology and Genetic Engineering in the Arab Food Industries. Arab Invest. J. (2008)

## **BOOKS**

1. Translation of "Food Chemistry" from English to Arabic (1983), University of Basrah, Iraq.
2. Co-Author of "Industrial Microbiology – Principles of Industrial Fermentations" (1987) University of Basrah, Iraq.

## **TEACHING EXPERIENCES**

- 1993 – 1999**                      **Ph.D. Courses:**  
**1. Enzymology**  
**2. Protein Chemistry and Engineering**  
**3. Bio-separation**
- 1979 – 1985**                      **M.Sc. Courses:**  
**1. Advanced Biochemistry**  
**2. Enzymology**  
**3. Protein Chemistry**  
**4. Instrumental Analysis**
- 1979 – 1985**                      **B.Sc. Courses:**  
**1. Biochemistry**  
**2. Physical Chemistry for Food Sciences**

### **THESES SUPERVISED**

<b><u>SR.</u></b>	<b><u>TITLE OF THESIS</u></b>	<b><u>DEGREE</u></b>	<b><u>YEAR</u></b>
1.	Purification and characterization of polyphenol oxidase from Barhee and Zahdi date cultivars	M.Sc.	1984
2.	Purification characterization of pectic enzymes from Hillawi and Zahdi dates	M.Sc.	1985
3.	Local Substitutes for imported dough improver	M.Sc.	1989
4.	Comparative study of the immunogenicity of <i>Brucella</i> antigens	Ph.D.	1993
5.	Extraction and characterization of <i>Hind III</i> isoschzomer from locally isolated <i>Haemophilus influenzae</i>	M.Sc.	1993
6.	Genetic investigation on local isolates of antibiotic producing streptomycetes	Ph.D.	1996
7.	Amylases production from the thermotolerant Mold ( <i>Aspergillus ornatius</i> group) by solid state fermentation	Ph.D.	1996
8.	Production, purification and characterization of Alkaline protease from <i>Aspergillus oryzae</i> by solid state fermentation	Ph.D.	1996
9.	Molecular studies on growth hormone gene of turkey ( <i>Gallus gallus</i> ) and the use of sperms as natural carriers for foreign DNA	M.Sc.	1996

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| 10. Production and purification of dextran from local isolate of <i>Leuconostoc mesenteroides</i>  | M.Sc. | 1997 |
| 11. Improvement of dextran production from locally isolated <i>Leuconostoc mesenteroides</i>   | M.Sc. | 1997 |
| 12. Purification and determination of basic characteristics of peroxidase from date palm leaves.   | M.Sc. | 1997 |
| 13. Production, purification and characterization of glucose oxidase from locally isolated <i>Aspergillus niger</i>                              | Ph.D. | 1997 |
| 14. Isolation and characterization of dextranase from locally isolated <i>Streptococcus salivarius</i>   | Ph.D. | 1998 |
| 15. Purification and characterization of an antigen from bovine spleen for the diagnosis of systemic lupus erythematosus (SLE) by modified ELISA | Ph.D. | 1998 |
| 16. Purification and characterization of medically important lectins from local plant sources  | Ph.D. | 1998 |
| 17. Production of alginic acid from local isolate of <i>Azotobacter vinelandii</i> by solid state fermentation.                                  | M.Sc. | 1998 |
| 18. Purification and characterization of <i>staphylococcal</i> protein A.  | Ph.D. | 1998 |
| 19. Identification of date palm cultivars by SDS-PAGE of leaf proteins   | Ph.D. | 1998 |
| 20. Purification and characterization of rennin-like enzymes from locally isolated <i>Mucor</i> by solid state fermentation                      | Ph.D. | 1998 |
| 21. Biochemical and molecular study on <i>Trypanosoma evansi</i> isolated from camels.   | Ph.D. | 1999 |
| 22. Study of some biologically active proteins from date palm seeds  | M.Sc. | 1999 |

**OTHER ACTIVITIES**

1. Consultant for AL-ANA'AM company for Drugs Production (Veterinary and Human) since 1995.
2. Consultant for National Research Projects on the Production of Medically Important Biologicals. (1997-1999).
3. Consultant for National Company for Food Industries (Analysis and Certification of Imported Enzymes).
4. Purification of the following enzymes and proteins for teaching and research projects of graduate students in the Dept. of Biotechnology and Genetic Engineering, Dept. of Chemistry, College of Medicine, College of Veterinary Medicine, College of Agriculture and College of Education:

Lysozyme, Peroxidase, Ovotransferrin, Hemoglobin, Ovalbumin, Bovine Serum Albumin, IgG, IGA, Ficin, Hemin Substitute, *Hind III*, *Sau 3A*, Ovomucin, Ovomuroid, Lentil Lectin, Flat Pea Lectin, Trypsin Inhibitor (from soybean and flat pea), Casein and Enzymatic Hydrolysates of Casein).

These products were prepared using the available laboratory instruments and had vital role in strengthening research projects.

- 5- ISO Internal Auditor (Ministry of Finance and Industry- UAE)18/6/2002 .
- 6- Consultant for **OASIS LTD. (DUBAI & ALGERIA)** On the project:  
**"Integrated Dates Processing Project in Algeria For Bioethanol Production With Ultimate Capacity of 100,000 Tons of Dates Per Year" -Since 2004.**
- 7- Computer Literacy : Microsoft Word , Office package