1- MU_FSCI_CHEM_ORGA_DATA_ Adel .Abd -El-Rahman

Name : **Adel Abdel-Hady ABDEL-RAHMAN**

Date and City of Birth : 12-12-1963, Queweisna, Menoufia

Nationality : Egyptian

Marital Status: Married

Children: Three

Occupation: Professor of Organic Chemistry,

Faculty of Science, Menoufia University, Shebin

El-Koam, Egypt

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Education:

1) B. Sc. special degree in Chemistry (Excellent, Honor) from Faculty of Science, Menoufia University, Egypt (1982 to 1986).
2) M. Sc. in Organic Chemistry (1990) from Faculty of Science, Menoufia University, Egypt.
3) Ph. D. in Organic Chemistry (1994) from Faculty of Science, Menoufia University, Egypt (Experimental part at Chemistry Department, University of Southern Denmark, Odense, Denmark from 1992 to 1994).

Occupation Chronology of Employment:

1) Demonstrator at Chemistry Department, Faculty of Science, Menoufia University from 1987 to 1990.
2) Assistant Lecturer at Chemistry Department, Faculty of Science, Menoufia University from 1990 to 1994.

3) Lecturer of Organic Chemistry at Chemistry Department, Faculty of Science, Menoufia University from 1994 to 1999.
4) Associate Professor of Organic Chemistry at Chemistry Department, Faculty of Science, Menoufia University from Feb. 2000 to Feb. 2005.
5) Professor of Organic Chemistry at Chemistry Department, Faculty of Science, Menoufia University from Feb. 2005.

2- MU_FSCI_CHEM_ORGA _LINK_ Adel .Abd -El-Rahman

E-Mail Address : adelnassar63@hotmail.com
Specialization (Specify):

1) *Main field*: Synthetic Organic Chemistry.
2) *Current research interests*: Nucleosides & Nucleotides, Peptides, and Modern Carbohydrate Chemistry.

Title of the M. Sc. Thesis from Menoufia University (Egypt):
Studies on the Synthesis of Some Uracil Derivatives and Expected Biological Activity

Title of the Ph. D. Thesis from [Menoufia University (Egypt) and Southern Denmark University, Odense (Denmark), through the channel system]:
Synthesis of Some Nucleosides and their Acyclic Analogues

Fellowships:

1) A grant from the Egyptian Government to carry out the experimental part of the Ph.D. through the channel program system at Chemistry Department, Odense University, DENMARK from 01-03-1992 to 28-02-1994.

2) Invitation to Chemistry Department, Odense University, DENMARK for a training period on a Bruker AC 250 FT spectrometer from 01-10-1995 to 01-01-1996.

3) Invitation from Prof. Dr. R. R. Schmidt to Fakultät für Chemie, Universität, konstanz, GERMANY as a Volkswagen Fellowship from 01-06-1996 to 01-10-1996.

4) JSPS Fellowship (Japan Society for the Promotion of Science) to Department of Chemistry and Biotechnology, Faculty of Engineering, Tokyo University, JAPAN for one year from 02-02-1999 to 20-01-2000.

5) AVH Fellowship (Alexander Von Humboldt) to Fakultät für Chemie, Universität, konstanz, GERMANY for 17 months from 01-03-2000 (Two months for German Language Course at Goethe Institute and the rest for research).

6) Resumption AVH Fellowship (Alexander Von Humboldt) to Fakultät für Chemie, Universität, konstanz, GERMANY for 2 months from 01-09-2003 to 30-10-2003.

7) Invitation to Medicinal Chemistry Department, Faculty of Pharmaceutical Sciences, Antwerpen University, Antwerpen, BELGIUM for 10 months from 01-10-2006 to 31-07-2007.

Teaching Experience:

Teaching the following Organic Chemistry Courses at Chemistry Department, Faculty of Science, Menoufia University (Egypt) and the University of Tokyo (Japan):

1. Principle of organic chemistry.
2. The application of electronic spectra, IR, ^{1}H & ^{13}C NMR and mass spectra to the structural characterization of organic compounds.
3. Stereochemistry (stereospecific and stereoselective synthesis of organic molecules).
4. Medicinal chemistry.
5. Insecticides chemistry.
6. Surfactants (detergents) chemistry.
7. Dyes and its applications on textiles.

8. Applied chemistry.
9. Modern carbohydrate chemistry.
10. Polynuclear chemistry.
11. Heterocyclic chemistry.
12. Chromatography and its applications on the separation and purification of organic compounds.
13. Selected topics of advanced organic chemistry.
14. Practical organic courses.
15. Biochemistry
16. Macromolecules organic chemistry.
17. Organometallic chemistry.
18. Petroleum chemistry.
19. Polymer chemistry.

Universities in which I Taught Chemistry:

1. Menoufia University (Egypt).
2. Alexandria University (Egypt).
3. Odense University (Denmark).
4. Konstanz University (Germany).
5. Tokyo University (Japan).
6. Antwerpen University (Belgium).

Universities in which I had worked as Professor of Organic Chemistry:

Menoufia University (Egypt). 1 .

2. Tokyo University (Japan).
3. Antwerpen University (Belgium).

Visiting Professor:

1. Visiting Professor at Graduate School of Frontier Sciences, The University of Tokyo, JAPAN for 6 months from 16-04-2002 to 15-10-2002 under the subject “Research on Chemical Synthesis of Biologically Active Nucleic Acid Derivatives”. It is also to teach a course for Ph. D. students under the title “Modern Carbohydrate Chemistry”.

2. Visiting Professor at Department of Medical Genome Sciences, Graduate School of Frontier Sciences, Tokyo University, Bioscience Building 702, 5-1-5 Kashiwanoha, Kashiwa, JAPAN for 3 months from 05-03-2006 to 05-06-2006 under the subject “Research on Chemical Synthesis of Biologically Active Nucleic Acid Derivatives”. It is also to teach two courses for Ph. D. students under the title “Acyclic Nucleoside Derivatives as Antiviral Agents” and "Modified Amino Acid Derivatives as Antiviral Agents.

Conferences:

1) Nucleosides and Nucleotides Meeting, Ørsted Institute, Copenhagen, DENMARK, September 1993.
2) 4th Intl. Conf. On Chemistry & Its Role in Development, Mansoura, EGYPT, April 1997.
3) 6th IBN SINA International conference on Pure and Applied Heterocyclic Chemistry, Ain Shams University, December 1997.
4) International Carbohydrate meeting, Konstanz University, Germany, May 2000.
5) 9th IBN SINA International conference on Pure and Applied Heterocyclic Chemistry, Ain Shams University, December 2004.
6) Personalized Medicine: New Opportunities for Drug Discovery, University of Antwerp, Universiteitsplein 1, Antwerp, Belgium, November 2006.
7) The 10th Sigma-Aldrich Organic Synthesis Meeting, Sol Cress, Spa, Belgium, December 2006.
8) "The 3rd Conference of the Egyptian Humboldtians" "Development of Chemical Research Through German-Egyptian Cooperation", Ismailia, Egypt, October 2007.

Membership:

1) Egyptian Chemical Society of Organic Chemistry.
2) DANIDA Project between Southern Denmark University, Odense, Denmark and Faculty of Science, Menoufia University, Egypt under the title: “Development of New Drugs Against Hepatitis”.
3) Japan Society For the Promotion of Science (JSPS), Cairo
4) Egyptian Society of Alexander von Humboldt Fellows (AVH).

Supervision of (M. Sc.) and (Ph. D.) Theses: (Menoufia University, Alexandria University, and Suez Canal University, Egypt):

I had supervised (10) Ph. D. theses and (21) M. Sc. Theses in several Egyptian Universities.

Referee of (M. Sc.) and (Ph. D.) Theses in Egypt and Japan:

I had refereed (8) Ph. D. theses and (18) M. Sc. Theses in several Egyptian Universities, in addition two two Ph. D. theses at the University of Tokyo, Japan.

Summary of my Research Work in Organic Chemistry and its Scientific Applications (See List of Publication):

I- Modification of Uracil Ring:

Uracil ring is one of important nucleic acid bases which have high biological activity as antiviral agent. Paper No. (**1**) and (**38**).

II- Modified Nucleosides as Antiviral Agents Against HIV and HIB viruses:

a- Nucleosides Modified with Methylthio group in the 2-position of the pyrimidine moiety: as antiviral agents with moderate activity against HIV and HIB viruses: Papers No. (**2**), (**4**), (**5**), (**8**), (**9**), (**10**), (**14**), (**22**), (**27**), (**32**), (**35**), and (**49**).

b- Nucleosides Modified with Ethoxy group in the 2-position of the pyrimidine moiety: as antiviral agents with moderate activity against HIV and HIB viruses: Papers No. (**3**), (**11**), (**23**), (**31**), and (**36**).

c- Nucleosides with Unnatural Bases: as antiviral agents with moderate activity against HIB virus: Papers No. (**15**), (**16**), (**20**), (**32**), (**33**), (**37**), and (**50**).

d- Isocytosine derivatives: as antiviral agents with moderate activity against HIV virus: Papers No. (**6**) and (**44**).

e- Oligonucleotides: Modified by pyrenylmethyl cytidine: Paper No. (**7**).

f- 5-Formylcytidine: In Excellent yield and pure form for the first time for using in artificial RNA: Paper No. (**18**).

g- Microwave irradiation for introduction of 5-hydroxymethyl group: To pyrimidines and their Nucleosides within three min. instead of 1-3 days: Paper No. (**29**).

III- <u>Carbohydrates:</u>

a- Glycosidase Inhibitors: Papers No. (**12**), (**13**) and (**17**).

b- Pure *α*-Anomers: Using $Yb(OTf)_3$ and TMSOTf: Papers No. (**19**), (**21**), (**24**) and (**26**).

c- Pure β-Mannopyranosides: Either by intramolecular glycosidation in the presence of rigid spacers or with the presence of electron withdrawing group as benzylsulphonyl group at position 2 and trichloroacetamidate as a leaving group at C-1: Papers No. (**25**) and (**28**).

IV- <u>Peptides:</u>

Synthesis, Antiviral, and Antimicrobial Evaluation of New *α*-Amino Acid esters bearing Different Heterocyclic Rings or Sugar Moieties as Side Chain: Papers No. (**39**), (**43**), (**45**), (**46**), and (**48**).

V- <u>Surfactants for Treating Crude Oil Emulsions:</u>

Water soluble nonionic surfactants based on Schiff base monomers were prepared by their etherification with β,`β- dichlorodiethylether and PEG 400 in presence of NaOH. The surface properties of the prepared surfactants were determined by measuring the surface tension at different temperatures. The prepared nonionic surfactants were evaluated as demulsifiers for synthetic water in crude-oil emulsions that were pronounced at different ratios of crude oil: water at 45^{o}C and 60^{o}C. The experimental results showed that the

dehydration rate of the prepared demulsifiers reached 90% and 100% at some concentrations.

Papers No. (**47**).

REFERENCES:

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