

First PUA International Conference on Advances in Pharmaceutical Sciences (1st PUA – ICAPS) Faculty of Pharmacy and Drug Manufacturing Pharos University in Alexandria, Egypt



CV

27-29, October 2015

I- PERSONAL DATA:



NAME:

IBRAHIM MOHAMED EL-AKKARY, MD, PhD

AFFILIATION:

- Ex-Vice dean for post-graduate studies and research of the Medical Research
 Institute, Alexandria University, Egypt
- Head of post-graduate studies and research committee, Medical Research
 Institute, Alexandria University, Egypt, 2004 2010.
- Secretary General of the annual conferences of Medical Research Institute in 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014.
- Establishing and head of the *scientific committee of the medical research*institute, 2004 2010
- Head of the committee for developing the hospital of the medical research
 institute, 2004 2010
- Head of the *drug policy committee of the hospital of the medical research*institute, 2004 2010
- Professor of clinical physiology and head of Bronchial Asthma Research Unit,
 Medical Research Institute, Alexandria University, Egypt.

Member of the Physiology Scientific Committee, Supreme Council of Universities, for promotion of the university staff. (assistant professors and

professors)

EDITORIAL POSITION:

- EDITOR - IN- CHIEF OF JOURNAL OF THE MEDICAL RESEARCH

INSTITUTE (JMRI)

- REVIEWER FOR JOURNAL OF MEDICAL INTERNET RESEARCH (JMIR),

IMPACT FACTOR (2013, 4.7)

ADDRESS:

- Business: Medical Research Institute, 165 El-Horria Avenue, Alexandria,

Egypt

Phone: 02 03 4285455, 02 03 4282373

Fax: +20 03 428 37 19

-Home: Behind 122 Galal El-Desoki St. Wabour El-Maia, Alexandria,

Egypt.

Phone: 02 03 4272044

DATE OF BIRTH: 1 st. July 1950

SEX: Male

RELIGION: Islam

MARITAL STATUS: Married

NUMBER OF CHILDREN: 4

NATIONALITY: EGYPTIAN

MAJOR SPECIALTY: Clinical Physiology

MINOR SPECIALTY: Clinical Cardio-Pulmonary Physiology

RESEARCH INTERESTS:

- Bronchial asthma: Incidence, relation to Socio-economic state,

Pathophysiology, Mechanisms and prevention of Exercise Induced asthma,

Management and Follow up.

- Exercise Physiology in health and disease
- Effects of Environmental Pollution on Respiratory system.
- Pulmonary Functions in Health and Different diseases.

II- QUALIFICATIONS:

DEGREE	UNIVERSITY	DATE
- M.B.Ch.B.	Alexandria, Egypt	November, 1974
- Master, Clinical Physiology	Alexandria, Egypt	October, 1979
-Ph.D., Clinical Physiology	Alexandria, Egypt	February, 1984

III- POSITION HELD:

POSITION	ORGANIZATION	DATE
HOUSE OFFICER	Alexandria University Hospitals, Egypt	1975 - 1976
GENERAL PRACTIONER	Armed Forces Hospitals	1976 - 1977
DEMONSTRATOR,	Medical Research Institute, Alexandria	1977 - 1979
CLINICAL PHYSIOLOGY	University, Egypt.	
ASS. LECTURER, CLINICAL	Medical Research Institute, Alexandria	1979 - 1984
PHYSIOLOGY	University, Egypt	
LECTURER, CLINICAL	Medical Research Institute, Alexandria	1984 - 1989
PHYSIOLOGY	University, Egypt	
ASS. PROF., CLINICAL	Medical Research Institute, Alexandria	1989 - 1994
PHYSIOLOGY	University, Egypt	
PROF. CLINICAL	Medical Research Institute, Alexandria	1994 till now
PHYSIOLOGY	University, Egypt	

- Vice dean for post-graduate studies and research of the Medical Research institute, from 2004 to 2010.
- **IV- TEACHING EXPERIENCE:** Teach Clinical Physiology (normal functions, disordered function and the principals of clinical tests and measurements that used to assess the function) in Medical Research Institute from 1984 till now.

V- CLINICAL EXPERIENCE: Involved in cardiopulmonary Problems for diagnosis,

assessment of severity, evaluation of drug efficacy and follow - up.

I have great experience in performing and interpretation of the

cardiopulmonary function tests (e.g. Pulmonary and Alveolar Ventilation, Lung

volumes and Capacities, Diffusing capacity of the Lung, Blood Gases tensions

and Acid - Base assessment, stress tests for Cardiopulmonary patients,

provocation tests for Cardiopulmonary diseases such as bronchial asthma by

exercise and Methacholine inhalation Challenges).

VI- RESEARCH EXPERIENCE:

A- UNIVERSITY DEGREE SUPERVISED:

MASTER THESIS: 15

PhD THESIS: 19

I- MASTER DEGREE:

1. Gabbour SN. The role of beta adrenoceptors in exercise – induced

asthma. M Sc Thesis, Clinical Physiology, Med Res Inst, Alex Univer.

2. Ibrahim MS. M Sc Thesis, Clinical Physiology, Med Res Inst, Alex

Univer.

3. El-Seweify MS. Bronchial reactivity in normal subjects and petroleum

workers, M Sc Thesis, Clinical Physiology, Med Res Inst, Alex Univer,

- El-Yamani MM. Effect of antihypertensive therapy on lipid metabolism in humans and rats. M Sc Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- Abdo AS. Effect of some hypolipidemic drugs on lipid metabolism in humans and rats. M Sc Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- El-Essawy AM. The effect of suggested physical training program on the efficiency of the cardiovascular and respiratory systems of the personnel of Frogmen. M Sc Thesis, Physical Education, Alex Univer.
- Hassan EY. Study the effect of 12-week rehabilitation program on exercise capacity and disease severity in asthmatic children. M Sc. Clinical physiology, Med Res Inst, Alex Univer.
- Masoud IM. Study of the relationship between bronchial hyperresponsiveness and metalloproteinmase enzymes in asthmatic patients. M Sc Applied medical chemistry, Med Res Inst, Alex Univer.
- Ezz Eldien EM. The role of leukotriene in exercise induced bronchoconstriction before and after rehabilitation training program.
 M Sc. Clinical physiology, Med Res Inst, Alex Univer.
- 10. Hamad S. Physical Education, Alex Univer.
- 11. El Bassiouny OS. Study of possible effect of exercise on the level of circulating leptin in hyperlipidemic patients. Applied medical chemistry, Medical Research Institute, Alex. Univ.

- El-Ghazali M. Alpha adrenergic functions in asthmatics. Ph D
 Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- Ibrahim MS. Cardiopulmonary and metabolic adaptations to exercise in diabetic patients. Ph D Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- El-Seweify MS. Study on pulmonary functions in cement workers in Egypt. Ph D Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- Gabbour SN. Study and evaluation of cardiac affection in patients with chronic obstructive pulmonary disease. Ph D Thesis, Clinical Physiology, Med Res Inst, Alex Univer.
- 5. El-Sayed MH. A study of immunological aspects in workers exposed to silica dust. Ph D Thesis, Immunology, Med Res Inst, Alex Univer.
- 6. Abdel Salam S. PhD, Physical Education, Alex Univer.
- 7. Mahmoud SA. PhD, Physical Education, Alex Univer.
- 8. Abo Shady SMM. PhD, Physical Education, Alex Univer.
- 9. Abdel Aziz AA. PhD, Physical Education, Alex Univer.
- 10. Mussa YEA. Effect of some anaesthetic agents on blood sugar, triglycerides, growth hormone, adrenocorticotropic hormone and liver function in human. PhD Physiology, Alex Univer.
- 11. El-Molla AFFF. Correlation between some cardiopulmonary functions, cyclic nucleotides (cAMP & cGMP) and prostaglandin F2 alpha in asthmatics before and after some I.V. anaesthetics. MD Anaesthesia, Alex Univer.

- 12. Shalaby MMA. Study of the impact of three different regimens of post-operative pain relief on some stress hormones, and respiratory functions. MD Anaesthesia, Alex Univer.
- 13. Abdel-Razik WI. Study the effects of suggested therapeutic recreational program on children with bronchial asthma in Alexandria, Egypt. PhD, Physical Education, Alex Univer.
- 14. Abu-Shamaa LEM. Role of the complement system in bronchial asthma and effect of two inhaled anti-inflammatory agents. PhD, Immunology Alex Univer.
- 15. Nour AM. The effect of inspiratory muscle training and progressive muscle relaxation technique on reducing dyspnea in chronic obstructive pulmonary diseased patients. Adult nursing, faculty of nursing, Alex. Univer.
- 16. Heiba DA. Bronchial hyperresponsiveness and induced sputum study in children with allergic rhinitis without asthma symptoms. Pediatrics, Faculty of medicine, Alex. Univer.
- 17. Masoud IM. Study the possible role of beta2 adrenergic receptors gene in the pathogenesis of bronchial hyperresponsiveness in asthmatic patients and its relation to disease severity and treatment response. Applied medical chemistry, Med Res Inst, Alex Univer.
- 18. Salama OA. Study of the possible role of beta-2 adrenergic receptor gene polymorphism in the pathophysiology of the association between obesity and asthma. , Clinical Physiology, Med Res Inst,

Alex Univer.

B- RESEARCH GRANTS:

RESEARCH TITLE	Organization FINANCING PROJECT	YEAR
BRONCHIAL REACTIVITY	Foreign Relation Co-ordination Unit,	1986 - 1988
AS INDICATION OF FUTURE	Supreme Council of Universities (FRCU),	
PULMONARY DISABILITY IN	Egyptian – American Linkage Project	
PETROLEUM WORKERS	Phase II (ULP II)	
STUDY AND EVALUATION	FRCU, ULP II	1990 - 1992
OF PULMONARY		
AFFECTIONS IN CEMENT		
WORKERS IN EGYPT		
STUDY OF THE EFFECT OF	FRCU, ULP II	1992 - 2002
REHABILITATION TRAINING		
PROGRAM ON THE POST-		
EXERCISE BRONCHO-		
CONSTRICTION IN		
PRIMARY SCHOOL AGE		
ASTHMATIC CHILDREN		

VII- CONFERENCE PRESENTATIONS:

1. Ibrahim M. El-Akkary, E. M. Hassan, M. S. Ibrahim, I. A. Rashwan, L. M. Abou-Shamma, A. Mastino (Alexandria, Egypt; Rome, Italy): Complement

- activation and exercise-induced asthma. (Poster discussion). *European* respiratory society (ERS) congress, Stockholm, Sweden, 2002.
- 2. Ibrahim M El-Akkary, Mervat S El-Seweify, Maha S Ibrahim, and Sally N Ghabour. Clinical Respiratory Physiology, Medical Research Institute, Alexandria University, Alexandria, Egypt .Clinical and physiological effects of rehabilitation training program on bronchial asthma in children. (Poster discussion). European respiratory society (ERS) congress, Vienna, Austria, 2003.
- 3. Ibrahim M El-Akkary, Zenat A El-Kholy, Mervat E El-Seweify, and Mohamed A Abdel Mohsen. Medical research institute, Alexandria University, Alexandria, EGYPT. Relationship between sputum level of matrix metalloproteinase (MMP-9)/tissue inhibitor of metalloproteinase (TIMP-1) and methacholine bronchial hyper-reactivity in asthma. (Poster discussion), European respiratory society (ERS) congress, Copenhagen, Denmark, 2005
- 4. Ibrahim El Akkary, Zeinat El Kholy, Mervat El Seweify, Seham Abo Shousha. Medical Research Institute, University of Alexandria, Alexandria, Egypt. The role of leukotriene in exercise - induced bronchoconstriction before and after rehabilitation training program. (Poster discussion). European respiratory society (ERS) congress, Berlin, Germany, 2008
- 5. Large number of local (Egyptian) scientific conferences as chairman and/or presenting research or talk.

Courses, Meetings & Conferences

- -American thoracic society conference, San Francisco, 2001
- -Training course, pulmonary function tests and cardio-pulmonary exercise testing, Germany, 2001
- -Conferences of the European respiratory society (ERS), Berlin, Germany, 2001, Stockholm, Sweden, 2002, Copenhagen, Denmark, 2005

VIII - PUBLICATIONS:

- 1- **Ibrahim M EI Akkary**. EFFECT OF MUSCULAR EXERCISE ON CHRONIC ASTHMATIC PATIENTS. Thesis submitted to Medical Research Institute, Alexandria. Univ. in fulfillment of Master Degree in Clinical Physiology (October 1979).
- 2- Abdullah SM, Abdel Kader MF, El Banawy S, Kandil S, **El Akkary I**. Detection of bronchial asthma in remission. Bul Alexandria Fac Med, 1980; XVI (4): 727-33.
- 3- Abdullah SM, Fahmy MS, Abdel Kader MF, Badr GA, Kandil SM, **El Akkary I**. Mechanism of prevention of exercise- induced asthma. Bul Alexandria Fac Med, 1980; XVI (4): 735 47.

- 4- **Ibrahim M El Akkary**. PHYSIOLOGICAL AND IMMUNOLOGICAL STUDY OF BRONCHIAL ASTHMA. Thesis submitted to Medical Research Institute, Alexandria. Univ. in fulfillment of Ph. D. in clinical Physiology (February 1984).
- 5- Kandil S, El Biali M, zaki FM, **El Akkary I**, Foda H, Helaly A. Cardiac performance in hypothyroidism. Tanta Med J, 1984; 12 (1): 37 43.
- 6- El Akkary I, El Biali M, Kandil S, Zaki FM, Fahmy MS. The role of mast cell stabilization in prevention of exercise induced asthma. Bul Alexandria Fac Med, 1985; XIX (2): 155 61.
- 7- El Biali M, **El Akkary I**, Kandil S, Khedr K. Cardio respiratory effects of calcium channel blockade and angiotensin converting enzyme inhibition in patients with severe chronic congestive heart failure. Bul Alexandria Fac Med, 1986; XXII (3): 705 13.
- 8- El Biali M, Kandil S, **El Akkary I**, El Shazly M, El Dibany A, Darwish AE. The role of angiotensin converting enzyme inhibition in management of resistant ascites due to Schistosomal hepatic fibrosis. Bul Alexandria Fac ed, 1986; XXII (3): 881 87.
- 9- El Akkary I, El Biali M, Abdel Rahman I, Foda H. Exercise performance in essential hypertensive patients. Bul Alexandria Fac Med, 1987; XXIII (1): 49 56.
- 10- Zaki FM, Gamal El Din L, Nour H, **El Akkary I**, El Ghazaly M, Fahmy S, Zaki K. Plasma cyclic nucleotides and bronchomotor tone. J MRI, 1987; 17 33.

- 11- Zaki FM, Gamal El Din L, Nour H, **El Akkary I**, El Ghazaly M, Fahmy S, Zaki K. Mast cell activity in cholinergic bronchial hyper reactivity. J MRI, 1987; 8 (Supl 2): 65 79.
- 12- El Akkary I, Gamal El Din L, El Faras AA, Nour H. The use of blood lactate response to submaximal exercise to assess the physiological response to maximal exercise in normal subjects. J MRI, 1987; 8 (Supl 2): 185 201.
- 13- Fahmy MS, Nour H, **El-Akkary IM**, Ghabbour SN, Zaki K. The role of beta adrenoceptors in exercise induced asthma MRI, 1988; 9(2): 35 69.
- 14- El-Akkary IM, Gamal El- Din L, Nour H, Ibrahim SA. Aerobic and anaerobic capacities in sprint and distance runners. J MRI, 1988; 9(2): 71 87.
- 15-El-Akkary IM, Hassan EM, Ibrahim MS, Fahmy MS, Foda HM. Relationship between T- Lymphocyte count, disease severity and bronchial hyperreactivity in asthmatic patients. Egypt J Med Sci, 1988; 9 (2): 295 303
- 16- **El-Akkary IM**, Hassan EM, Ibrahim MS, Foda HM. T- lymphocytes in exercise induced asthmatic attack. Egypt J Med Sci 1988;9 (2):
- 17- **El-Akkary IM**, Hassan MY, Ibrahim SA, Marouf. M, Foda. Regulation of arterial blood pressure during rest and at maximal exercise in trained and untrained subjects. J MRI, 1989; 10 (1): 139 158.

- 18- Basha HMM, Nour H, Megahed NAI, Wadie A and **El- Akkary I**. Changes in serum lipid pattern in patients with chronic cholecystitis, under the effect of anesthesia and surgery. J MRI.
- 19- Megahed NA, Salman ZK, **El Akkary IM.** Sympathetic blockade during spinal anesthesia under meperidine and local anesthetic. J Med Res Inst. 11,(1): 217; 1990.
- 20- **El-Akkary IM**, Hafez AAH, Kandil MH, Abdel Aziz. Magnesium homeostasis during maximum exercise in patients with hepatosplenic Schistosomiasis. Bul Alexandria Fac Med. 26, (3): 343; 1990.
- 21- **EI-Akkary IM**, Megahed NA, Mowafy MN. Caffeine as a modulator of bronchial hyper-reactivity in adult asthmatics. Bul H Inst Pub Health, 20,(3): 747; 1990.
- 22- Zaki K, Foda H, Nour H, Gamal El-Din, **El-Akkary I,** Fikry N, Helmy HA. Effect of some hypolipidemic drugs on lipid metabolism in humans and rats. J Med Res Inst. 11, (3): 121; 1990.
- 23- **El-Akkary IM**, Hassan MY, El-Sewify M. Pulmonary flow rates and methacholine bronchial challenge in Egyptian petroleum workers. Bul Alexandria Fac Med. 26, (5): 825; 1990.
- 24- **El-Akkary IM,** Abou-Rayah FB, Fawzy RK. Upper airway status in patients with thyroid goiters. J Med Res Inst. 12, (1): 309;1991.

- 25- **El-Akkary IM,** El-Biali M, Zaki HK, Fadali GA, Abou-Seif HH, Girgis RS, El-Faras A, El-Yamany MM. Effect of methyl dopa and propranolol on lipid metabolism in patients with essential hypertension. J Med Res Inst. 12, (1): 327; 1991.
- 26- Sadek SA, El-Belbessy SF, Moufy MN, **El-Akkary IM.** Clinicophysiologic and immunologic assessment of immunotherapy of asthmatic patients. J Med Res Inst. 2, (3): 231; 1991.
- 27- **EI-Akkary IM**, Abo Ollo MM, Afifi MK. Study of possible mechanism(s) of spinal anesthesia induced fall in end-tidal P_{CO2}. Bul Alexandria Fac Med. 27, (6): 1455; 1991.
- 28- El-Belbessy SF, El-Biali M, El-Sharkawy SM, **El-Akkary I**, Sobhy M. The effect of immunosuppression on the role of schistosomal lung on circulating immunoglobulins and lymphocyte transformation. J Med Res Inst. 13, (1): 17; 1992.
- 29- El-Biali M, El-Belbessy SF, Kandil S, **El-Akkary IM**, Sobhy M.

 Cardiopulmonary effects of immunosuppression in patients with Schistosomal cor pulmonale. J Med Res Inst. 13, (1): 37; 1992.
- 30- El-Biali M, Rashwan E, Mowafy MN, **El-Akkary IM**, Abdel-rahman I. Interleukin 2 secretion and T-lymphocyte subsets in patients with newly diagnosed insulin dependent diabetes mellitus. Bul Alexandria Fac Med. 28, (5): 1063; 1992.

- 31- **El-Akkary IM**, El-Biali M, Marouf M, Atta ME. Cardiopulmonary responses to graded exercise in diabetic patients. Bul Alexandria Fac Med. 28, (5): 1075; 1992.
- 32- **El-Akkary IM**, Fadali GA, Fawzy RK, El-Ghazali M, El-Seweify MS.
 Respiratory system affection in Egyptian cement workers. J Med Res Inst. 14, (2): 75; 1993.
- 33- **El-Akkary IM.** Zaki K. Kandil S, Abu Ryan, Gamal El-din L, Atta MA, Gabbour SN, El-Ghazali M. Alpha adrenergic functions in bronchial asthma. J Med Res Inst. 14, (2): 101;1993.
- 34- **El-Akkary IM**, Atta MA, Naana H, El-Seweify M, Kandil S. Left ventricular performance in patients with chronic obstructive pulmonary disease. J Med Res Inst. 14, (2): 125; 1993.
- 35- El-Sayed LH, **El-Akkary IM,** Rashwan EA, Demian SR, El-Sayed MH, Ramadan MI. Immunological aspects of workers exposed to silica in Egyptian cement industry. Bull H Instit Pub Health, 23, (1): 155; 1993.
- 36- Badr G, **El-Akkary IM**, El-Mogazy T, Kandil M. Magnesium response to exercise in diabetics. J Med Res Inst 14, (3): 201; 1993.
- 37- **EI-Akkary IM.** Atta MA, EI-Belbessy SF, Mowafy MN, Ibrahim MS. The role of human atrial natriuretic peptide in pulmonary hemodynamic regulation in obstructive pulmonary disease. J Med Res Inst 14, (4): 23; 1993.

- 38- El-Biali M, **El-Akkary IM,** Ibrahim MS, Mowafy MN, El-Seweify ME. Bronchial responsiveness in diabetic patients in relation to autonomic neuropathy. J Med Res Inst. 14, (4): 39; 1993
- 39- El-Akkary IM, El-Mogazy T, Fahmy L, Badr G. Serum insulin and glucagon levels after different grades of exercise in diabetic patients. Egypt J Lab Med 5, (3): 369; 1993.
- 40- Ibrahim MS, Abdel Salam SA, Gabbour SN, El Seweify M, El Mogazy T, Moussa YI, **El Akkary IM**. Magnesium profile and exercise performance in Egyptian athletes. Bull Alex Fac Med 31 (1): 74; 1995
- 41- Ibrahim MS, El Seweify M, Gabbour SN, **El Akkary IM.** The integrity of autonomic nervous system in childhood and adulthood asthmatic patients. Bull Alex Fac Med 32 (3): 275; 1996
- 42- Gabbour SN, El Seweify M, Abdel Tawab SM, **El Akkary IM**. The pathophysiological role of phospholipids in bronchial asthma. Bull Egy Soc Physiol Sci. 16 (1): 117; 1996
- 43- Al Deba M, Basha HM, Kandil M, **El Akkary IM**, Megahed N, El Molla A, Hafez A. Blood gases, cyclic nucleotides (cAMP and cGMP) and prostaglandins F2α in asthmatics under intravenous anesthesia. J Med Res Inst 17 (2): 71; 1996 44- Abaza MM, Narshy WK, Ramadan MI, **El Akkary IM**, Shalaby MM, Basha

HM. Study of serum β- endorphin, plasma cortisol, blood glucose levels and

urinary nitrogen excretion under three different regimens of post-operative analgesic techniques. J Med Res Inst 17 (2): 181; 1996

- 45-Sadek SA, Ahmed MY, Mowafi MN, **El Akkary IM**. Anti-IgE autoantibody in Schistosomal hepatic fibrosis patients with bronchial asthma. J Med Res Inst, 19 (2): 179; 1998
- 46- El-Seweify ME, Gabbour SN, Moussa YI, **El Akkary IM**. The interplay of physiological mechanisms in determining oxygen consumption drift in normal females. J Med Res Inst, 19 (3); 79; 1998
- 47- Ibrahim MS, Hassan EM, **EI Akkary IM**, Rashwan IA, Abu Shamma LM, Mastino A. The contribution of complement activation in bronchial asthma. J Med Res Inst 21 (4): 90; 2000
- 48- **El-Akkary IM**, El-Ghazali M, Shalaby MM. Study of pathophysiology of post-operative pain induced hypoventilation. Bull Alex Fac Med 36 (3): 201; 2000
- 49- El-Ghazali M, El-Seweify ME, Abdel Ghani M, **El-Akkary IM.** Oxidant antioxidant imbalance in exercise induced bronchoconstriction in asthmatics. Bull Egypt Soc Physiol Sci, 22 (2): 1; 2002
- 50- El Akkary IM, El-Seweify ME, Ibrahim MS, Gabbour SN. The effect of rehabilitation training program on the post-exercise bronchoconstriction in primary school children. Bull HIPH, 32 (3):615; 2002

- 51- **El Akkary IM**, El Ghazali M and Younis I. Study of the effect of 12-week rehabilitation program on exercise capacity and disease severity in asthmatic children. J Med Res Inst. 27 (1): 45; 2006
- 52- I. M. El Akkary, Z. A. El-Kholy, M. M. Mokhtar, M. M. Mostafa, I. M. Masoud, and A.I. Adam. Study the Possible Role of β2 Adrenergic Receptor Gene in the Pathogenesis of Bronchial Hyperresponsiveness in Asthmatic Patients and its Relation to Disease Severity and Treatment Response. *J Am Sci* 2012;8(10):394-

408.

- 53- **El-Akkary IM**, El-Khouly ZA, El-Seweify ME, El-Batouti GA, Abdel Aziz E, Adam A. Role of leukotrienes in exercise-induced bronchoconstriction before and after a pilot rehabilitation training program. International Journal of General Medicine 2013:6; 631–636
- 54- El Akkary IM, et al. respiratory wheeze sound analysis using digital signsl processing techniques. 7th International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN) (CICSyN 2015)