



Mahmoud B. El-Ashmawy, Ph. D.

PERSONAL DATA

Name **Mahmoud Mohammad Bakr El-Ashmawy**
 Position Professor of Medicinal Chemistry - Emeritus
 Birth Feb. 5, 1954. Mansoura, Egypt
 Address Faculty of Pharmacy, Mansoura University (MU)
 Mansoura 35516, Egypt.
 Phone 2-050-2200236 (W); 2-0106-2344455 (Mobile).
 Fax 2-050-2200242 (W)
 E-mail mashmawy@yahoo.com

EDUCATION

Ph. D. Medicinal Chemistry, "*Cum Laude*", Universidad Complutense de Madrid, Spain. **1986.**
Dissertation: "Synthesis and preliminary pharmacological evaluation of thienylether derivatives: Thiophene analogues of certain pharmacodynamic agents".
M. Sc. Pharmaceutical Chemistry, Mansoura University, Egypt. **1982.**
Thesis: "Synthesis and screening of certain *N*-trityl derivatives as molluscicides".
B. Sc. Pharmaceutical Sciences, "*Excellent with Honor*", Mansoura University, Egypt. **1977.**

ACADEMIC POSITIONS: Mansoura University (MU), Egypt

- Feb. 5, 2014 Emeritus Professor.
- July 26, 1998 Professor of Medicinal Chemistry.
- May 25, 1992 Associate Professor of Medicinal Chemistry.
- Feb. 23, 1987 Lecturer (Assistant Professor) of Medicinal Chemistry.

ADMINISTRATIVE POSITIONS at Mansoura University (MU), Egypt

- Sept, 2011- July 2014 Chairman, Dept. of Medicinal Chemistry, MU.
- Aug. 2010- Aug. 2011 Chairman, Dept. of Medicinal Chemistry, MU.
- Apr. 2008 - Mar. 2010 Dean, Faculty of Pharmacy, MU.
- Dec. 2004 - Apr. 2008 Chairman, Dept. of Medicinal Chemistry, MU.
- Apr. 2008 – Mar. 2010 Manager, Continuous Improvement and Qualifying for Accreditation Project (CIQAP), Faculty of Pharmacy, MU.
- May 2005 – Jan. 2008 Director, Performance Appraisal and Development Unit, (Later named Quality Assurance Unit). Faculty of Pharmacy, MU.

PROFESSIONAL EXPERIENCE ABROAD: SABBATICAL LEAVE and FELLOWSHIPS

- March 1-28, 2012 Visiting Professor, Oman Assistant Pharmacy Institute, *Oman*.
- Feb.2007 - Mar. 2007 Visiting Professor, Pharmacy, Garyounis University, *Libya*.
- Feb.2006 - Mar. 2006 Visiting Professor, Pharmacy, Garyounis University, *Libya*.
- Oct. 2001 - Aug. 2003 Chairman, Dept. of Medicinal Chemistry, Al-Isra University, *Jordan*.

- Aug. 1998 - Sept 2001 Professor of Medicinal Chemistry, Al-Isra University, *Jordan*.
- Apr. 1996 - June 1996 Visiting Professor, Pharmacy, University of Sana'a, *Yemen*.
- Aug. 1993 - Sept. 1994 Research Scientist, Medical College of Virginia, Richmond, *USA*.
- July 1989 - June 1991 Postdoctoral Fellow, Medical College of Virginia, Richmond, *USA*
- Oct. 1982 - June 1986 PhD student, Institute of Medicinal Chemistry, CSIC, Madrid, *Spain*.

PROFESSIONAL MEMBERSHIP

Mansoura University (MU).

- Member, University Council, MU, 2008-2010.
- Member, Supreme Committee of New Programs, MU. 2008-2010.
- Member, MU Strategic Planning Committee, 2008.
- Board Member, English language Studies Center, MU. 2008-2010.
- Board Member, Medical, Pharmaceutical and Veterinary Studies Center, MU. 2008-2010.
- Member, Medical Committee, 9th Egyptian Universities Youth Week, MU. Feb. 2009.
- Member, MU Medical Research Ethics Committee 2005-2008.
- Member, Library Committee, MU. 2005-2006.
- Member, Committee of Laboratories and Scientific Instruments, MU, 2004-2005.

Faculty of Pharmacy (FoP), MU.

- Chairman, Faculty Council. 2008-2010.
- Chairman, Board of Dept of Medicinal Chemistry. 2004-2008 & 2010-2014.
- Chairman/Member, Committee of Clinical Pharmacy Program. 2007-Now.
- Chairman/Member, Editorial Board, Mansoura Journal of Pharmaceutical Sciences. 2005-2013.
- Chairman, Board of Drug Analysis Unit. 2008-2010.
- Member, Faculty Council. 2003-2008 & 2010-Now.
- Member, Committee of Wise Decisions-Making. 2010 – Now.
- Member, Committee of Cultural Affairs. 2013 – Now.
- Member, Committee of Education and Student Affairs. 2003-2006 & 2010- 2013.
- Member, Committee of Higher Studies and Research. 2007-2008.

Supreme Council of Universities (SCU), MoHE

- Member, the Committee of Pharmaceutical Studies Sector, Planning Committee, 2008-2011.
- Member, the Committee of Pharmaceutical Studies Sector, Deans Committee, 2008-2010.
- Member/Chairman, the Triplicate Committee for the Final Exams of Pharmaceutical Chemistry in Faculties of Pharmacy in the Egyptian Universities. 2006-2013. (Chairman of the Committee 2009/2010).

Al-Isra University, Amman, Jordan (1998 – 2003)

- Member, University Council, Al-Israa University. 2000-2002.
- Member/ Deputy Chairman, University Curriculum Committee, Al-Isra University. 2001-2003.
- Member, University Committee of Scientific Research, Al-Isra University. 1999-2001.
- Member, Board of Faculty of Pharmacy, Al-Israa University, 1998-2003.
- Chairman, Dept. of Medicinal Chemistry and Pharmacognosy. 2001-2003.
- Chairman, Curriculum Committee, Faculty of Pharmacy. 2001-2003.
- Chairman, Recruitment and Promotion Committee, Faculty of Pharmacy, 2001-2003.
- Counselor, Pharmaceutical Education in Al-Israa University, 2004.

Societies and Syndicates

- Member, Egyptian Syndicate of Pharmacists. (Since 1977)
- Member, Egyptian Pharmaceutical Society. (Since 1978)
- Member, Executive Committee, Association of Faculties of Pharmacy in the Arab World. (2008-2010).

AWARDS/ HONOR

- Appreciation Medal. Egyptian Syndicate of Pharmacists. Feb. 2009.
- Peer Reviewers Certificate of Excellence. National Committee for Quality Assurance. March 2008.
- Third World Academy of Science (TWAS) (Trieste, Italy), 1992 Award in Medicinal Chemistry, Sept. 27, 1993.
- University Incentive (Encouragement) Award in Medicinal Chemistry 1991, MU, May 25, 1992.

LANGUAGES

- Arabic (Mother Tongue)
- English (Excellent)
- Spanish (Fair)

SPECIALITY

- Medicinal/Pharmaceutical Chemistry and Drug Design.
- Synthesis of new organic molecules for biological evaluation.

EDUCATIONAL AFFAIRS**A) TEACHING EXPERIENCE**

- Standard Medicinal Chemistry courses offered to undergraduate Pharmacy students. Since 1986.
- Advanced Medicinal Chemistry courses for graduate students.
- Drug Design course for undergraduate and graduate students.
- Basic Pharmaceutical Organic Chemistry courses for undergraduate students.
- Research techniques in Medicinal Organic Chemistry to new graduate students.

B) EXAMINER of MEDICINAL CHEMISTRY AND DRUG DESIGN COURSES

- Internal examiner for medicinal chemistry and drug design courses, MU.
- External examiner for medicinal chemistry and drug design courses, at different Egyptian Universities: Alexandria, Ain-Shams, Al-Azhar, Cairo, Helwan, Minia, Assiut, Suiz-Canal, Tanta, Zagazig, Beni-Suef, 6 October, Misr University of Science and Tecnology (MUST), Misr International University (MIU), Future University, Egyptian Russian University (ERU), Delta University.
- External examiner for Medicinal Chemistry and Drug Design courses, at regional universities: Garyounis University, Benghazi, Libya (Sept 2003), Medical Arab University, Benghazi, Libya (August 2008), Al-Fateh University, Tripoli, Libya (May 2005; June 2006; August 2007; May 2010).

QUALITY ASSURANCE (QA) in EDUCATION**A) PHARMACY CURRICULUM DEVELOPMENT**

- Member of the Planning Commission, Pharmaceutical Studies Sector, the Supreme Council of Universities (SCU). 2008-2011.
- Member of the Curriculum Development Committee, Faculty of Pharmacy, MU.
- Director, Performance Appraisal and Deveolpment Unit, (Later named Quality Assurance Unit). Faculty of Pharmacy, MU. 2005-2008.
- Coordinator of seminars to raise the efficiency of the performance of Faculty Members and spread the culture of quality within the college and to achieve the quality of the examination paper.
- Member, Installment of the electronic courses of Medicinal Chemistry. 2010.
- Chairman, Curriculum Committee, Faculty of Pharmacy, Al-Isra University, Jordan. 2001-2003.

B) INTERNAL AUDITOR and EXTERNAL REVIEWER of EDUCATIONAL PROGRAMS and COURSES:

- Internal Auditor of B.Sc. Programs, Faculty of Pharmacy, MU. 2012.
- External Reviewer of B.Sc. Programs. (Bachelor of Pharmaceutical Sciences and Bachelor of Clinical Pharmacy), Faculty of Pharmacy, Assiut University 2013.
- External Reviewer of new By-laws of Post-Graduate Programs, Colleges of Pharmacy: Ain Shams University (2012); King Abdul Aziz University, Saudi Arabia (2010), and Ajman University of Science and Technology, United Arab Emirates (2009).
- External Reviewer of Organic and Medicinal Chemistry and Drug Design Courses. Faculties of Pharmacy, of Assiut (2007), Tanta (2010), Ain Shams (2010) Universities and German University at Cairo GUC (2013).
- Consultant of Quality Assurance in Pharmaceutical Education, Misr International University MIU (2012/2013).
- Counselor of Pharmaceutical Education, Al-Israa University, Amman, Jordan. (2004).

C) EXTERNAL EVALUATOR and PEER REVIEWER in Different ACCREDITATION and QUALITY SITE VISITS. (Attachment 1)

- External Evaluator for National Authority for Quality Assurance and Accreditation of Education (NAQAAE) site visits. (2011-Now)
- Peer Reviewer for Projects Management Unit (PMU), Ministry of Higher education (MoHE), to monitor different Quality projects: CIQAP, QAAP and MENPP (MANP. (2006-Now)
- External Evaluator for Quality Assurance Centers of Egyptian Universities: Mansoura, Minia and Tanta Universities, in follow-up and simulation site visits. (2009-Now)
- External Auditor representing the Pharmaceutical Studies Sector (Supreme Council of Universities) (2008-2010)

D) SEMINARS, WORKSHOPS and TRAINING COURSES in QUALITY MANAGEMENT SYSTEM and QUALITY ASSURANCE of EDUCATION. (Attachment 2)

- Participation in workshops and seminars in Quality Assurance and Accreditation fields offered by PMU (Project Management Unit) of MoHE, during the establishment of Quality systems at higher institutions; and by NAQAAE.
- Attendance of Training Program on Quality assurances and accreditation (10 hrs), (FLDP), MU. March 2006.
- Coordinator. Organization and implementation of different seminars and workshops in Quality Assurance and Accreditation fields for Faculty members, staff and students at Faculty of Pharmacy, MU.

E) FACULTY and LEADERSHIP DEVELOPMENT

Attendance of *FACULTY and LEADERSHIP DEVELOPMENTAL PROJECT (FLDP)* programs that aim to improve the educational and the leadership skills of Faculty Members

- Human resources management (20 hrs), July 2005.
- Administrative skills (20 hrs), August 2005.
- Financial affairs (15 hrs), September 2005.
- Quality assurances and accreditation (10 hrs), March 2006.

F) OTHER (QUALITY) TASKS

- Implementation of QMS and QA in Faculty of Pharmacy during the Deanship Epoch (2008-2010), which led to ISO Certificate in Education in August 2010; and Accreditation Certificate in June 2011.
- Project Manager, Continuous Improvement and Qualifying for Accreditation Project (CIQAP). Faculty of Pharmacy, MU 2008-2010.
- QA Unit Manager, Faculty of Pharmacy, MU 2005-2008.

- Member, Management and Executive Teams of Strategic Planning Committee, MU 2008.
- Member, Management and Executive Teams, the establishment of the internal Quality Assurance System Project, Faculty of Pharmacy, MU. 2005.
- Coordinator, Developmental Engagement visit to Faculty of Pharmacy. MU. 2006.
- Coordinator, Internal Quality System Follow-up visit to Faculty of Pharmacy. MU. 2007.
- Faculty Coordinator at Mansoura University Development Center (UDC). 2004-2007.

RESEARCH and OTHER SCHOLARLY and SCIENTIFIC ACTIVITIES

A) RESEARCH INTEREST

- Synthesis and structural elucidation of new organic and heterocyclic compounds.
- Design and synthesis of potentially active chemotherapeutic agents.
- Application of Molecular modeling techniques in development of selective ligands for CNS receptors.
- Interpretation of the binding data and biological activity in terms of Structure-Activity Relationship.

B) RESEARCH PROJECTS

- Principal Investigator /Member of a research project entitled: "Design and Synthesis of new Curcumin analogues as anticancer agents", as the first interdisciplinary research project that engaged three academic departments at Faculty of Pharmacy, Mansoura University.

C) SUPERVISION (Attachment 3)

- Supervision of Theses and Dissertations to obtain M Sc and Ph D degrees in Medicinal Chemistry, (Since 1991).
- Spervision of Review Articles for Post-graduate Diploma Students. MU (Since 2007).
- Spervision of Essays for summer field training program students, MU (Since 2004).
- Supervion of Graduation Projects for students at Al-Israa University (1998-2003).

D) AUDITING and REFEREE of SCIENTIFIC ARTICLES in Periodicals, Theses and Dissertations, Promotion Committee, Research Projects, Awards, ...) (Attachment 4)

Referee of M.Sc. and Ph.D. Theses and Dissertations

- Member of the *COMMITTEE-IN-CHARGE* for the inspection and refereeing of 47 M Sc and Ph D Theses in different Egyptian Unversities (Mansoura, Cairo, Ain Shams, Azhar, Minia, Suez Canal, Alexandria, Assiut, Helwan, Beni-Suef, Zagazig, and German University in Cairo-GUC)

Referee for Promotion Committee

- Auditing and arbitration of 19 scientific works, introduced for Promotion:
- The Scientific Committee for Promotion in Pharmaceutical Chemistry and Biochemistry, SCU, MoHE, Egypt; (Apr 2014); The Scientific Committee for Promotion in Pharmaceutical Chemistry (Associate Professors), SCU, MoHE, Egypt; (2005; Nov 2006; Sept 2007), The Scientific Committee for Promotion in Pharmaceutical Chemistry (Professors), SCU, MoHE, Egypt (Jan 2006).
- The Scientific Committee for Promotion of Al-Azhar University (2006, 2007, 2014).
- The Committee for Promotion in Pharmaceutical Chemistry, AUST, Ajman, United Arab Emirates (Mar 2007).
- The Committee for Promotion in Pharmaceutical Chemistry University of Philadelphia. Amman, Jordan (2003).

Referee in Periodicals

- Auditing and arbitration of 20 scientific articles in the field of pharmaceutical medicinal chemistry submitted for publication in globally indexed journals and Periodicals. Examples: Medicinal Chemistry Research (USA), (1993, 1994); Mansoura Journal of Pharmaceutical

Sciences, MU, (2004, 2005, 2006, 2011); Bulletin Faculty of Pharmacy, Cairo University;. (2005); Bulletin of Pharmaceutical Sciences, Assiut University, (2006, 2006, 2007, 2008, 2013); Synth. Communication (USA), (2009); Molecules (Switzerland) (2010); Drug Research (Germany), (2013).

- Chairman of the editorial board of 'Mansoura Journal of Pharmaceutical Sciences' (2008-2010); and member of the editorial board (2004-2008) & (2010-2013).

Referee of Scientific Projects

- 5 Projects introduced to Science and Technology Development Fund (STDF) July 2010, Oct 2010, July 2013, July 2013, and Aug. 2013.
- 16 Projects introduced to Cultural Affairs and Missions Sector, MoHE. Jan 2011.
- 1 Project introduced to King Saud University (KSU). Sept 2004.

Referee of Awards

- Examination and evaluation of scientific articles; for Scientific Excellence Award, Assiut University. 2009.

(E) OTHER SCIENTIFIC and SCHOLARLY ACTIVITIES:

- Member of the Research Ethics Committee, Mansoura University 2005-2008.
- Organization of seminars and annual conferences in Department of Medicinal Chemistry.
- Adoption of research plans for the scientific departments and college.

F) CONFERENCES and MEETINGS (Attachment 5)

- Attendance of several Pharmaceutical and other Conferences and Meetings in different countries

Egypt (1994, 1995, 2002, 2004, 2009, 2010, 2013)	Sweden (1984)
Spain (1983)	Jordan (1997, 1998, 1999, 2000, 2002)
USA (1990, 1991, 1994)	Yemen (1996)
Syria (1997, 2008)	United Arab Emirates (2002, 2012, 2013).
Tunisia (2000)	
- **Chairman** of a scientific session at the 6th Scientific Congress of the Association of Colleges of Pharmacy in the Arab World; Ajman, United Arab Emirates. Oct. 19-21, 2002.
- **Invited speaker** of a plenary lecture entitled (Pharmaceutical Education and relevance to Pharmacy Practice) at the inauguration the The Fourth Conference for the Arab Colleges of Pharmacy, Monastir, Tunisia; Nov. 16-17, 2000.
- **Chairman** of the Organizing Committee of Workshop (Computer-Based Drug Design). Mansoura University. Feb. 7-8, 2010

G) PUBLICATIONS (Attachment 6)

- 45 Original research articles published in international, regional and national Peer-reviewed Periodicals in the field of Medicinal chemistry: *Examples of the International Journals:*
 - *Journal of Medicinal Chemistry (USA) (I.F. 5.480)*
 - *Current Medicinal Chemistry (Netherlands) (I.F. 3.715)*
 - *European Journal of Medicinal Chemistry (France) (I.F. 3.432)*
 - *J Enzyme inhibition & Medicinal Chemistry (UK) (I.F. 2.383)*
 - *Bioorganic Medicinal Chemistry Letters (UK) (I.F. 2.331)*
 - *Molecules (Switzerland) (I.F. 2.095)*
 - *Medicinal Chemistry Research, (USA) (I.F. 1.751)*
 - *Archiv der Pharmazie Med Chem (Weinheim) (Germany) (I.F. 1.396)*
 - *Monatshefte fur Chemie (Germany) (I.F. 1.347)*
 - *il Farmaco (Italy)*
 - *Gazzetta Chimica Italiana (Italy)*
 - *Anales de Quimica (Spain).*

UNIVERSITY and COMMUNITY SERVICES**A) UNIVERSITY SERVICE**

- Implementation of Quality Assurance system in Faculty of Pharmacy, MU, during Deanship epoch (2008-2010), leading to its Accreditation by NAQAAE in June 2011, as the first accredited Faculty in Mansoura University, and the third accredited Faculty nationwide.
- Implementation of Quality Management System in Faculty of Pharmacy, MU, during Deanship epoch (2008-2010), leading to ISO certification in Education "ISO 9001 - 2008 / IWA2" in August 2010.
- Membership of Councils and Committee inside the University:
 - Member of Mansoura University Council (2008-2010)
 - Member of the Supreme Committee of new programs, MU (2008-2010)
 - Member, Strategic Planning Committee that developed a five-year Strategic Plan for Mansoura University, 2008.
 - Member of the Research Ethics Committee, MU (2005-2008).
 - Board Member of the English Language Studies Center. MU (2008-2010)
 - Board Member of the the Medical, Pharmaceutical and Veterinary Studies Center, MU. (2008-2010).
 - Member, Medical Committee during the Egyptian Universities Youth Week, MU. (Feb. 2009).
 - Membership of Committee emanating of University Council: as Committee for Laboratories and Scientific Equipment in 2004/2005; and Library Committee in 2005/2006.
 - Member, Wise decisions committee, Faculty of Pharmacy, MU, 2010-2014.
- Attendance and participation in conferences, workshops and training courses organized by the University:
 - The *First* Conference of FLDP (Reality and Future Perspective). University Development Center. MU. Nov. 19, 2005.
 - Conference on Marketing of Applied Research and University Services. Research and Community Service Environmental Affairs Sectors. MU. Mar. 11-12, 2009.
 - Fourth International Environmental Conference (environment and health safety). Community Service and Environmental Affairs Sector. MU. Oct. 28, 2009.
 - Second Conference of the development of higher education. University Development Center. MU. Nov. 1-2, 2009.
- Organizing lectures and seminars to disseminate cultural and health awareness within the College and University Community:
 - Symposium (Safety and Security in laboratories) Aug. 26, 2008.
 - Lecturer (Accreditation. Where are we?) for Faculty Members May 4, 2009.
 - Training course in First Aid, Oct. 20, 2009.
 - Organizing a symposium (Reproductive Health) in partnership with Ministry of Health. Dec. 26, 2009.
- Attending the 12th Scientific Congress of the Association of Colleges of Pharmacy in the Arab world. Aleppo, Syria, Nov. 5-7, 2008. Membership of FoP-MU in the Scientific Association of Colleges of Pharmacy in the Arab world.
- Team Leader follow-up and review of the Faculty of Medicine, MU. Feb. 2010.
- Coordinator for the College of Pharmacy at the University Development Center. May 2004-June 2007.
- Contribution in the preparation of new By-Laws for undergraduate and postgraduate programs at the Faculty of Pharmacy MU.

- Construction of a new building (Building D) in the Faculty of Pharmacy, of five-stories, that include a mosque, an animal house, a Central Research Laboratory and 5 teaching halls; Furnishing and equipping the 5 teaching halls through friends donations.
- Equipping the electronic examination hall in the Faculty of Pharmacy, with furniture and air conditioners, and adding a new part of 40-computers capacity.
- Processing and securing a centralized air-conditioned hall in the Faculty of Pharmacy, for marking and scoring of the examination papers.
- Mapping and signing emergency exits in the educational buildings in the Faculty of Pharmacy, to achieve safety and security
- Achieving quality of the examination paper in the Faculty of Pharmacy.
- Developing and supporting the electronic infrastructure in the College of Pharmacy.

B) COMMUNITY SERVICE

- NAQAAE Expert. Conducting external audits of 4 university colleges for the purpose of accreditation from National Authority for Quality Assurance and Accreditation in Education (NAQAAE) (Since 2011).
- Performing Follow-up site-visits for monitoring and evaluation of new programs at Colleges of Pharmacy of the Egyptian Universities (Since 2008).
- Conducting follow-up and evaluation visits of the new projects at University Colleges - Project Management Unit of the Ministry of Higher Education (Since 2006).
- Organizing and implementing the first meeting with stakeholders at FoP-MU; to discuss Pharmaceutical education development; the recent trends in the study plan and teaching methods; improvement of learning outcomes according to labor market needs; and the establishment of QMS in College, Oct. 13, 2008.
- Organizing the (*First Employment Fair*), FoP-MU; Aug. 1, 2009.
- Organizing the 34th Class Graduation Day. FoP-MU; Nov. 22, 2008.
- Organizing the (College Definition day) for high school students and their Parents, FoP-MU; July 21, 2009.
- Chairman of the Organizing Committee of the workshop (Computer-based Drug Design), FoP-MU, Feb. 2010.
- Chairman of the Committee supervising the Syndicate of Pharmacists elections. Syndicate of Pharmacists at Dakahlia. July 8, 2011 (Certificate of Appreciation).
- Chairman of the committee supervising the Syndicate of Pharmacists elections. (Midterm Renewal), Syndicate of Pharmacists at Dakahlia. Mar. 22 2013.
- Lecturer, (Pharmacy Job Opportunities), Faculty of Pharmacy, Delta University. Dec. 9, 2013.
- Lecturer, (Drug Regulatory affairs); Diploma of Clinical Pharmacy Pharmacotherapy, and preparation for the American Board of Pharmacy Specialties BPS. Syndicate of Pharmacists at Dakahlia. June 2013, and Sept. 2014.
- Lecturer, (The relevance of Medicinal chemistry in Pharmacy Practice). Training Program in Clinical Pharmacy Apr. 16-18, 2011.
- Lecturer, (Continuing Pharmacy Education), Jordanian Syndicate of pharmacists. June-Aug 2001.
- Supervision and Overseeing of many Students Scientific trips to the Pharmaceutical Companies and Social Leisure trips to Cairo, Alexandria, Ismailia, and Fayoum. till 2005.