

MAGID ABOU-GHARBIA, PhD

BUSINESS:

Wyeth Research

CN-8000

Princeton, NJ 08543-8000

Tel.: (732) 274-4522

Fax: (732) 274-4500

e-mail: abougam@wyeth.com

SUMMARY OF QUALIFICATIONS & ACCOMPLISHMENTS:

Senior Vice President & Head of Chemical & Screening Sciences, responsible for overseeing and directing Wyeth Discovery chemistry and screening research efforts of 500 scientists at four Discovery sites in support of Neuroscience, Women's Health/Bone, Inflammation, Oncology, Cardiovascular/Metabolic Diseases therapeutic areas.

Twenty-five years of pharmaceutical research experience in Drug Discovery and Development resulting in the identification and development of multi New Chemical Entities (NCEs) and clinical candidates highlighted by:

- The discovery of four Marketed Drugs and several drugs under clinical development including the first-in-class antidepressant, Effexor®, short-action hypnotic Sonata®, anti-cancer agent Mylotarg®, a broad-spectrum antibiotic Tygacil®, a non-steroidal HRT, Bazedoxifene®, an SNRI, Pristiq® (DVS-233) for vasomotor symptoms and depression and an anticancer cell cycle inhibitor, Torisel® (Temsirolimus, CCI-799).
- Building a strong multi-disciplinary Chemical & Screening Sciences organization based on modern drug discovery technologies.
- Establishing key enabling technologies such as HTS, Combinatorial Chemistry, SWAT (Synthetic Work-up Attack Team), Bioorganic/Enzymology, Chiral Technology, Pharmaceutical Profiling, Interface groups and two state-of-the-art compound lectrivers equipped with computerized inventory systems.
- Fostering a highly creative environment focusing on innovation, productivity and contributing 9-12 drug candidates to the Wyeth pipeline on an annual basis.
- Adding value to Wyeth marketed products (latest efforts were in support of the Premarin® and Effexor® franchises).
- Contributions resulted in over 175 publications, presentations, invited lectures, inventor of 99 issued US patents and over 300 patents worldwide.
- Recognition of scientific achievements through numerous awards from external scientific and professional organizations as well as internal recognition.

PROFESSIONAL EXPERIENCE :

- 2005 - Present **Senior Vice President & Head**, Chemical & Screening Sciences, Wyeth Research, Collegeville, PA. Overseeing and directing Wyeth Discovery Chemistry and Screening research efforts at 4 research centers in Collegeville, PA, Princeton, NJ, Pearl River, NY and Cambridge, MA. Department of 500 scientists responsible for delivering ~10 NCEs into the development pipeline in 5 therapeutic areas on an annual basis. Member of Research & Development Executive Committee (RADEX) providing input in the formulation of scientific and strategic directions and decision-making pertaining to Wyeth R&D activities.
- 2003 - 2004 **Vice President & Department Head**, Chemical & Screening Sciences, Wyeth Research, Collegeville, PA. Overseeing Wyeth Discovery Chemistry and Screening research efforts at 4 research centers in Collegeville, PA, Princeton, NJ, Pearl River, NY and Cambridge, MA.
- 1997 - 2002 **Vice President & Department Head**, Chemical Sciences, Wyeth-Ayerst Research, Princeton, NJ. Overseeing Wyeth Research's Chemistry activities in five major therapeutic areas. An organization of 335 scientists located in Radnor, PA, Princeton, NJ, Pearl River, NY and Cambridge, MA.
- 1995 - 1996 **Assistant Vice President**, Chemical Sciences, Wyeth-Ayerst Research, Princeton, NJ, USA with responsibility for directing research efforts and management of the Chemical Science organization in the newly merged Wyeth-Ayerst Research and American Cyanamid Lederle organization, an organization operating out of three discovery sites, Princeton, NJ, Pearl River, NY, and Radnor, PA.
- 1994 - 1995 **Assistant Vice President**, Global Chemical Sciences, Wyeth-Ayerst Research, Princeton, NJ, USA (182 Chemists at the U.S. site in Princeton, NJ and the European site in Taplow, UK).
- 1991 - 1994 **Director**, Medicinal Chemistry, CNS Research, Wyeth-Ayerst Research, Princeton, NJ, USA
- 1989 - 1991 **Associate Director**, Medicinal Chemistry, Cardiovascular and CNS Research, Wyeth-Ayerst Research, Princeton, NJ, USA
- 1988 - 1989 **Section Head**, Medicinal Chemistry, CNS Research, Wyeth-Ayerst Research, Princeton, NJ, USA
- 1987 - 1988 **Principal Scientist**, Medicinal Chemistry, Wyeth-Ayerst Research, Princeton, NJ, USA
- 1984 - 1987 **Research Scientist**, Medicinal Chemistry, Wyeth Laboratories, Radnor, PA, USA
- 1982 - 1984 **Research Chemist**, Medicinal Chemistry, Wyeth Laboratories, Radnor, PA, USA

ACADEMIC APPOINTMENTS:

- 2007 - Present Adjunct Professor, School of Pharmacy, Center for Drug Discovery (CDD), Northeastern University, Boston, MA
- 2004 - Present Member of Scientific Advisory Board for Biotechnology & Pharmaceutical Industry, Ministry of Health, Cairo, Egypt.
- 2004 - Present Chemical Biology Discussion Group Program Committee Member, New York Academy of Sciences
- 2003 - Present Adjunct Professor, School of Pharmacy, University of Ferrara, Ferrara, Italy
- 1990 - Present Adjunct Professor, Medicinal Chemistry, School of Pharmacy, Temple University, Philadelphia, PA
- 2001 - 2004 Chair, Scientific Advisory Board, Rider University, Lawrenceville, NJ
- 2000 - Present Member of Scientific Advisory Board, Widener University, Chester, PA
- 1998 - Present Member, Board of Visitors, School of Pharmacy, Temple University, Philadelphia, PA
- 1998 - 2002 Adjunct Professor, Organic Chemistry, School of Pharmacy, Cairo University, Cairo, Egypt
- 1997 - 2001 Member, Scientific Advisory Board, Rider University, Lawrenceville, NJ

RESEARCH INTEREST:

Research interest included the manipulation of synthetic approaches in the design and synthesis of biologically active agents. Methodologies included: 1,3-dipolar cycloaddition reactions, Claisen's rearrangement, Diels-Alder reactions, chemistry of ketenes, sulfilimines, synthesis of substituted steroids, the use of receptor homology, bioisosteric replacement strategies, rational and structure-based drug design approaches.

HONORS AND AWARDS:***External:***

2007 • American Institute of Chemists (AIC) Chemical Pioneer Award

2006 • Elected Fellow of the Royal Society of Chemistry (FRSC), London, UK

• Researcher of the Year (Hall of Fame inductee)

Awarded by Healthcare Institute of New Jersey (HINJ) for scientific achievements throughout the pharmaceutical industry – building a strong multi-disciplinary Chemical & Screening Sciences organization that has enhanced Wyeth's drug pipeline.

- **“Trailblazer Award” Minority in Research Science Award from Science Spectrum Magazine.**
- 2004 New Jersey Inventors Hall of Fame Award**
Awarded by NJ Institute of Technology and R&D Council of NJ for extraordinary contributions to advancement of knowledge and human welfare in the State of New Jersey
- 2003 Procter Medal**
Awarded by the Philadelphia Drug Exchange (PDE), American Pharmaceutical Association for distinguished service in the alleviation of human suffering and advancing the health of the public and progress of the health profession in the pharmaceutical industry
- 2002**
- **Guest Commencement Speaker**
Graduating class of College of Science & Technology, Temple University
 - **Egyptian Pharmaceutical Society**
Awarded annually by the Egyptian Pharmaceutical Society for significant research contributions in Drug Discovery & Development
- 2001**
- **Earle B. Barnes Award**
Awarded by American Chemical Society (ACS) for outstanding achievements in Chemical Research Management
 - **POCC**
Awarded by Philadelphia Organic Chemists Club (POCC) for significant contributions to organic chemistry and service to the scientific community
- 1998 Prolific Inventor of the Decade**
US Patent & Trademark in their Technology Assessment & Forecast Report citing inventors who hold > 70 issued US Patents during 1987-1997
- 1997 ACS-Philadelphia Section Award**
Awarded by Philadelphia chapter of the ACS for major achievements in research in organic chemistry
- 1976-78 Dean’s Fellowship**
University of Pennsylvania, Philadelphia, PA for scholastic achievements
- 1974-77 Teaching Fellowship**
University of Pennsylvania, Philadelphia, PA
- 1967-71 Valedictorian Award**
Cairo University, Cairo, Egypt (top of class for four consecutive years – class of 500 students)

Internal:

- 1997 Wyeth-Ayerst Patent Award**
For issued US patents in 1996 (most issued patents in one year – 25 US patents)

1994 Wyeth-Ayerst Teamwork Award

For outstanding teamwork and contributions in Global CNS strategic planning

1992 • Wyeth-Ayerst Exceptional Achievement Award

In recognition of outstanding personal achievement and contributions to discovery and development at Wyeth

1990-92 Wyeth-Ayerst Patent Award

Three time recipient (consecutively) for issued patents for compounds in clinical development (Zalospirone, Carvotroline, & Adatanserin)

IMPACT ON WYETH DISCOVERY:

- Built a single, multi-disciplinary Chemistry and Screening organization that provided the efficient use of the flexible resources to discovery projects in all therapeutic areas at the four Discovery sites: Radnor, PA; Princeton, NJ; Pearl River, NY and Cambridge, MA.
- Provided strategic, scientific and administrative leadership for Wyeth Discovery worldwide chemistry and screening research efforts of >480 scientists and support staff with an Operating and Capital Budget of over \$100 million.
- Enhanced chemistry skills and capabilities via the recruitment of several high caliber scientists. The latest large recruitment campaign resulted in the hiring of 88 chemists (34 PhDs and 54 BS/MS) in a period of about 18 months (1995-1997). Maintaining a low turnover rate of <4.5%.
- Introduced new initiatives aimed at maximizing productivity, promoting scientific excellence and innovation and conducting scientific peer reviews to ensure fair performance appraisals of staff and equitable distribution of incentives and rewards based on performance.
- Identified and established several enabling technologies to enhance Wyeth Drug Discovery capabilities: such as Combinatorial Chemistry (1994), state-of-the-art high throughput screening (1994), two state-of-the-art compound files equipped with computerized lektreivers inventory system in Princeton (1994) and in Pearl River (1995), Bio-organic/Enzymology group (1995) and SWAT (Synthetic Work-up Attack Team) in Pearl River (1995), Interface group (1995), Pharmaceutical Profiling group (1998) and Chiral Technology (2002) as core functions within the Chemical and Screening Sciences organization to enhance the process of lead identification, lead optimization and lead selection.
- Identified and established several collaborative chemistry and technology alliances: with ArQule (1998-2001), a state-of-the-art Combinatorial Chemistry company to enhance our discovery efforts in the areas of lead identification and lead optimization. This collaboration led to the identification of Oxytocin antagonist and Gamma Secretase inhibitor, two Development Track compounds. In 2003 two new collaborations were established with Albany Molecular Research Institute (AMRI) in Albany, NY and with NiKem in Milan, IT in the area of library enhancement and lead optimization. In 2006 established one of the major outsourcing initiatives in the pharmaceutical industry with GVK Bio in Hyderabad, India with 150 chemists in a dedicated research facility.

ACCOMPLISHMENTS: NOVEL COMPOUNDS ADVANCED INTO CLINICAL DEVELOPMENT:

1996 – Present • *Directing Medicinal Chemistry research efforts at 4 sites. Contributions led to the discovery of 4 Marketed Drugs and the advancement of ~50 NCEs into Clinical Development during the past 5 years.*

1982 – 1996 • *Earlier personal contributions toward the design and synthesis of novel agents for the treatment of CNS Disorders, Cardiovascular & Metabolic Diseases, Antiallergy and Immunosuppressant areas have led to the following significant discoveries:*

"Premarin® Research": The isolation, identification, synthesis and patenting of several new Premarin® components with favorable cardioprotective activity (1996-1997).

"Effexor®": The discovery of the marketed antidepressant Effexor®, a first in class SNRI, a 5-HT and NE re-uptake inhibitor with rapid onset of action (invented by M. Husbands et al., in 1981 and the NDA was approved in 12/93). Current Chemistry support for the Effexor® franchise includes the synthesis and patenting of new prodrugs.

"Verdia®": The discovery of Verdia®, the FDA Advisory Board approved antihypertensive AII antagonist (invented by J. Ellingboe et al., in 1991).

"Gevotroline, Carvotroline, Zalospiroline & Adatanserin": Invention of the Antipsychotic Agents, Gevotroline & Carvotroline, novel D₂/5-HT₂ antagonists (both advanced to Phase II); Invention of the non-benzodiazepine anxiolytic Zalospiroline a 5-HT_{1A} partial agonist (advanced to Phase II) and the invention of Adatanserin, a mixed 5-HT_{1A} partial agonist/5HT₂ antagonist (advanced to Phase II and out-licensed).

"DAA-312 & DAB-452": Invention of DAA-312 (invented by Stack, Abou-Gharbia, et al. In 1992), a D₂ partial agonist (advanced to an IND-Track) and, the discovery of Aplindore also know as DAB- 452 (invented by Stack, Mewshaw, et al. In 1998), a novel dopamine partial agonist antipsychotic agent (currently in Phase II).

"EAA-090, EAB-318 & WAY-132983": The discovery of novel competitive and non-competitive NMDA antagonists, two of which EAA-090 and EAB-318 were advanced to IND Track (Perzinfotel also know as EEA-090 is currently in Phase I); The discovery of (WAY-132,983), selective M-1 agonists, a potential agent for treatment of acute and chronic neuro-degenerative disorders (advanced to IND-track).

"WY-49051": Invention of novel class of non-sedating H₁-antagonists, one of which, WY-49,051 advanced to IND-track status and is currently available for out-license.

"Rapamycin Analogs": Invention of a novel series of rapamycin carbamates and hindered esters as immunosuppressant agents, two of which, WAY-129,327 and Temsirolimus (CCI-779) advanced to IND-track (Torisel® also known as CCI-799 is currently in Phase III as an anticancer agent).

EDUCATION:

- 1979 - 1981 NIH, Fels Research Institute and Department of Chemistry, Temple University
NIH Postdoctoral Fellow (Research in the anticancer area with Professors D. Swern and Peter Magee), responsibilities included:
- a) synthesis of several inhibitors of glucose-6-phosphate dehydrogenase as potential anticancer agents. This work led to the synthesis of **Fluasterone**, a DHEA analog which is currently in late **phase II clinical trials** as an anticancer agent;
 - b) investigation of the chemistry of iminosulfuranes, developing a new synthesis of oxazolinones and indolinones and the synthesis of several natural products (streptozotocin, monomethyl-arginine, dehydroepiandrosterone analogs, etc.).
- 1974 - 1979 University of Pennsylvania, Philadelphia, PA (GPA 4.0/4.0)
Ph.D. in Chemistry (under the supervision of Professor Madeleine M. Joullié).
 Dissertation entitled "Synthesis of spirofluorenes of Biological Interest."
 Investigation of the chemistry of ketene-sulfur dioxide adduct; development of new methods for the synthesis of nitrones and spirocompounds.
- 1971 - 1974 Cairo University, Cairo, Egypt, (GPA 4.0/4.0)
M.Sc. in Chemistry (under supervision of Professor M. Khalifa). Dissertation entitled "Synthesis of 3,5-dioxypyrazolidines of Pharmacological interest".
- 1966 - 1971 Cairo University, Cairo, Egypt, (4.0/4.0)
B.Sc. in Chemistry and Pharmaceutical Sciences (Class Valedictorian).

CONTINUING EDUCATION:

- 2006: "Chairman's Strategic Leadership Session II", sponsored by Wyeth CEO, Short Hills Hilton, Short Hills, NJ (5/4-25, 2006)
- 2005: "Chairman's Strategic Leadership Session", sponsored by Wyeth CEO, Short Hills Hilton, Short Hills, NJ (12/1-2, 2005)
- 1998: "Global Leadership Program", Seven-Day workshop sponsored by AHP and Linkage Inc., The Forrestal at Princeton, (11/2-8, 1998)
- 1997: "The Leadership Development Program Workshop", Center for Creative Leadership, five-day workshop 5/18-23, 1997, the Rensselaer at Hartford Graduate Center, Hartford, CT.
- 1994: "Front Line Leadership" Workshop, Wyeth-Ayerst Research, Radnor, PA
 "Setting Performance Standards and Job Descriptions" Workshop, W-AR, Princeton, NJ
 "Time Management Workshop", Wyeth-Ayerst Research, Princeton, NJ
- 1990: "Management Development Seminar", five-day workshop 10/28-11/2/90. Pharmaceutical Manufacturers Association Management Development Course, Columbia University Graduate School of Business, Harriman, NY

1986: "Leadership Skills Course", two-week course, Villanova University, Villanova, PA

EXTERNAL SCIENTIFIC ACTIVITIES:

Panel Discussion & Session's Chair:

- Plenary Lecture, IUPAC, Ibn Sina, International Conference, Luxor, Egypt, Feb. 17-20, 2007.
- Organizer and Plenary lecture speaker at CMB-06, International Symposium on Chemistry, Biology & Medicine, Paphos, Cyprus, May 28-June 1, 2006.
- CEO Panel Discussion, "Public Private Partnerships" BioVision Alexandria, 2006 April 26-28, 2006.
- Panel Discussion, Ethics Meets the Marketplace: Best Practices in Public-Private Partnerships to Adapt Animal and Agricultural Biotechnology to the Needs and Conditions of the Developing World", Rockefeller Foundation Conference, Bellagio, Italy, October 3-7, 2005.
- Panel Discussion, "Outsourcing – Making it Work to Your Advantage," 2005 MidAtlantic Bio Conference, Ronald Reagan Center, Washington, DC, October 26-27, 2005.
- CEO Panel Discussion" Patents Pharmaceuticals and New Therapies For Human Health in Developing Countries", BioVision Alexandria, 2004, Alexandria, Egypt, April 3-6, 2004.
- Presidential Event at the 229th ACS National Meeting, Chemistry Enterprise 2015: Where in the World Will We Be, "A Future Outlook for the Chemistry Enterprise: A Pharmaceutical Industry Perspective", March 14, 2004, San Diego, CA.
- Organizer and Session Chair "Advances in Medicinal Chemistry", at the 7th International Congress of Heterocyclic Chemistry, Alexandria, Egypt, March 27-28, 2000.
- Organizer and Session Chair "Advances in Medicinal Chemistry", at the 7th International Congress of Heterocyclic Chemistry, Alexandria, Egypt, March 27-28, 2000.
- Organizer and Session Chair "Neurodegenerative Disorder", at the International Conference on New Methods on Drug Research, Limasolde, Cyprus, May 1994.
- Organizer and Session Chair "Advances in Dopamine Research", at the 1993 Gordon Research Conference on Medicinal Chemistry.

Reviewer:

Journal of Medicinal Chemistry
European Journal of Medicinal Chemistry
Synthesis
Journal of Pharmaceutical Sciences
Current CNS Patents
J. Org. Chem.

Professional Organizations:

Fellow of the Royal Society of Chemistry, Member of Society for Neuroscience, American Chemical Society, New York Academy of Sciences, Philadelphia

Organic Chemists Club (Secretary 1986-1987), Phi Lambda Upsilon, Sigma Xi,
ACS Corporate Association, ACS Award Committee.

Editorial and Scientific Advisory Boards:

C&E News Advisory Board (2006-2008)
ChemMedChem (Angewandte Chemie) (2005-Present)
Drug Development Research (1992-1996)
Drugs of the Future
Current Patents
Therapeutic Opinion on Current Patents
Current Drugs
Drug News and Perspectives
Medicinal Chemistry Research
Current Topics in Medicinal Chemistry

PUBLICATIONS:

78 (see attached Publications list)

PATENTS:

99 US Patents (see attached Patents list)

PRESENTATIONS & INVITED LECTURES:

92 (see attached Presentations list)

PUBLICATIONS:

1. "Lecozotan Hydrochloride: Cognition Enhancer, Treatment for Alzheimer's Disease-Competitive 5-HT_{1A} Receptor Antagonist," W.E. Childers, Jr., B.L. Harrison, M.A. Abou-Gharbia, S. Raje, V. Parks, M.N. Pangalos, and L.E. Schechter, Drugs of the Future, 32 2007.
2. "Lecozotan (SRA-333): A Selective Serotonin 1A Receptor Antagonist That enhances the Stimulated Release of Glutamate and Acetylcholine in the Hippocampus and Possesses Cognitive-Enhancing Properties," L.E. Schechter, D.L. Smith, S. Rosenzweig-Lipson, S.J. Sukoff, L.A. Dawson, K. Marquis, D. Jones, M. Piesla, T. Andree, S. Nawoschik, J.A. Harder, M.D. Womack, J. Buccafusco, A.V. Terry, B. Hoebel, P. Rada, M. Kelly, M. Abou-Gharbia, J.E. Barrett, and W. Childers, JPET 314:1274-1289 (2005).
3. "Synthesis and Biological Evaluation of Benzodioxanyl-Piperazine Derivatives as Potent Serotonin 5-HT_{1A} Antagonists: The Discovery of Lecozotan," W.E. Childers, Jr., M.G. Kelly, M.A. Abou-Gharbia, T.H. Andree, B.L. Harrison, G. Hornby, L. Potestio, S.J. Rosenzweig-Lipson, J. Schmid, D.L. Smith, S.J. Sukoff, G. Zhang and L.E. Schechter, J. Med. Chem., 48:10,3467-3470 (2005).
4. "Tiplaxtinin, a Novel, Orally Efficacious PAI-1 Inhibitor: Design, Synthesis, and Preclinical Characterization", H. Elokdah, M. Abou-Gharbia, J. K. Hennen, G. McFarlane, C. P. Mugford, G. Krishnamurthy, and D. L. Crandall, J. Med. Chem., 47, 3491-3494 (2004).
5. "Design, Synthesis, and Biological Evaluation of Thio-Containing Compounds with Serum HDL-Cholesterol-Elevating Properties," H. Elokdah, T.S. Sulkowski, M. Abou-Gharbia, J.A. Butera, S.Y. Chai, G.R. McFarlane, M-L. McKean, J.L. Babiak, S.J. Adelman and E.M. Quinet, J. Med. Chem., 47, 681-695 (2004).
6. "Rapamycin Analogs with enhanced potency and water solubility", W. Kao, M. Abou-Gharbia, J.H. Musser, R.L. Vogel, M.T. Chou, J. Schmidt, B.D. Tran, R. Caccese, C.P. Eng and S. Sehgal, Bioorg. Med. Chem. Lett. (in preparation).
7. "Optimization of Natural Product Leads into Drug Candidates", M. Abou-Gharbia, Chapter in Biodiversity, Kluwer Academic/Plenum Pub., 60-70 (2002).
8. "EAA-090", W.E. Childers, M.A. Abou-Gharbia, J.A. Moyer, M.M. Zaleska, Drugs of the Future, 27 (7), 633-638 (2002).
9. "The Design, Synthesis and Biological Evaluation of Benzimidazole - spaced phosphono- α -Amino Acids of the AP-6 Type, The Discovery of EAB-318 as a Highly Potent Competitive NMDA Antagonists", R. Baudy, H. Fletcher, III, L. Astra, M. Zaleska, D. Bramlett, R. Tasse, D. Kowal, J.P. Yardley, R.P. Stein, B. Hofmann, W.E. Childers, J. Moyer and M. Abou-Gharbia, J. Med. Chem. 44. 1516-1529 (2001).
10. "Design, Synthesis and Preclinical Characterization of novel, Highly selective Indole Estrogens". C.P. Miller, M.D. Collini, B.D. Tran, H.A. Harris, Y.P. Kharode, J.T. Marzolf, R.A. Moran, R.A. Henderson, R.H. Bender, R.J. Unwalla, L.M. Greenberger, J.P. Yardley, M. Abou-Gharbia, R.C. Lyttle and B.S. Komm, J. Med. Chem., 44, 1654-1657 (2001).
11. "Design, Synthesis and Biological Evaluation of C-42 Hydroxyesters of Rapamycin: The identification of CCI-779". J.S. Skotnicki, C.L. Leone, A.L. Smith, Y.L. Palmer, K. Yu, C.M. Discafani, J.J. Gibbons, P. Frost, M.A. Abou-Gharbia, 2001, Clin. Cancer Res., 7 (November 2001 Suppl): 37492 (2001).

12. "The Preclinical Pharmacological Profile of WAY-132983, a Potent M1 Preferring Agonist", A. Bartolomeo, H. Morris, J. Buccafusco, N. Kille, S. Rosenzweig-Lipson, M. Husbands, A. Sabb, M. Abou-Gharbia, J. Moyer and C. Boast, J. Pharmacol. Exp. Ther., 292, 584-596 (2000).
13. "Synthesis and SAR of Adatanserin: Novel Adamantyl Aryl- and Hetero-arylpiperazines with dual 5-HT_{1A} and 5-HT₂ Activities as Potential Anxiolytic and Antidepressant Agents," M. Abou-Gharbia, W. Childers, Jr., H. Fletcher, G. McGaughey, U. Patel, M. Webb, J. Yardley, T. Andree, C. Boast, R. Kucharik, Jr., K. Marquis, H. Morris, R. Scerni, and J. Moyer, J. Med. Chem., 42, 5077-5094 (1999).
14. "Discovery of a Highly Potent Functionally-Selective Muscarinic M1 Agonist, WAY-132,983 Using Rational Drug Design and Receptor Modeling", A. L. Sabb, G. M. Husbands, J. Tokolics, R. P. Stein, R. P. Tasse, C.A. Boast, J. Moyer and M. Abou-Gharbia, Bioorg. & Med. Chem. Letters, 9, 1895-1900 (1999).
15. New Generation Dopaminergic Agents 4. Exploiting the 2-Methyl Chroman Scaffold. Synthesis and Evaluation of Two Novel Series of 2-(aminomethyl)-3,4,7,9-tetrahydro-2H-Pyrano[2,3-e]indole and Indolo-one Derivatives. R.E. Mewshaw, K.L. Marquis, X. Shi, G. McGaughey, G. Stack, M.B. Webb, M. Abou-Gharbia, T. Wasik, R Scerni, T. Spangler, J.A. Brennan, H. Mazandarani, J. Coupet, T.H. Andree. Tetrahedron, 54, 7081-7108 (1998)
16. "The Design and Synthesis of [2-(8,9-Dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]phosphonic Acid (EAA-090) as a Potent NMDA Antagonist via the use of 3-cyclobutene-1,2-dione as an achiral α -Amino Acid Bioisostere," W. Kinney, M. Abou-Gharbia, D.T. Garrison, J. Schmid, D. Bramlett, M. Zaleska, D.M. Kowal, R. Tasse and J.A. Moyer. J. Med. Chem. 41, 236-246 (1998).
17. "New Generation Dopaminergic Agents 2. Discovery of 3- Hydroxy-Phenoxyethylamine and 3-Hydroxy-N-Phenylpiperazine Dopaminergic Templates", R.E. Mewshaw, M. Husbands, E.S. Gildersleeve, M.B. Webb, X. Shi, H. Mazandarani, M.I. Cockett, R. Ochalski, J.A. Brennan, M. Abou-Gharbia, K. Marquis, J. Coupet, and T. Andree, Bioorg. Med. Chem. Lett. 8, 295-300 (1998).
18. "New Generation Dopaminergic Agents 1. Discovery of a Novel Scaffold which Embraces the D₂-Agonist Pharmacophore. Structure-Activity Relationships of a Series of 2-Aminomethyl Chromans". R.E. Mewshaw, J. Kavanagh, G. Stack, K.L. Marquis, X. Shi, M.Z. Kagan, M.B. Webb, A.H. Katz, A. Park. Y.H. Kang, M. Abou-Gharbia, R. Scerni, T. Wasik, L. Cortes-Burgos, T. Spangler, J.A. Brennan, M. Piesla, H. Mazandarani, M.I. Cockett, R. Ochalski, J. Coupet, and T.H. Andree, J. Med. Chem. 40(26), 4235-4256 (1997).
19. "WAY-131256 Is an Orally Active, Efficacious, and In Vivo Functionally Selective M₁ Agonist", A.L. Sabb, R.P. Stein, R.L. Vogel, R. Tasse, S. Amburn, D.K. Fairman, D. Kowal, D. Malhotra, C.A. Boast, A. Bartolomeo, H. Morris, T. Sailer, J. Moyer, M. Abou-Gharbia, and D.M. Ho, Drug Develop. Res., 40, 185 (1997).
20. "New Antihistamine Piperazines and Piperidine Derivatives," M. Abou-Gharbia, S. T. Nielsen, M. Webb and U. Patel, J. Med. Chem., 38 (20), 4026-4032 (1995).
21. "From Structural and Pharmacological Aspects of Peptidomimetics to Advances in Therapy of CNS Disorders," M. Abou-Gharbia, S. Ashwell, C. Boast, and I. Cliffe, Drug News and Perspectives, 377-384 (1994).

22. "Sigma Receptors and Ligands: The Sigma Enigma," M. Abou-Gharbia, S. Ablordeppy and R. A. Glennon, Annual Reports in Medicinal Chemistry, Academic Press Inc., San Diego, CA, 2807-2810 (1993).
23. "Immune-Directed Mechanisms of Alzheimer's Disease," C. Boast and M. Abou-Gharbia, Drug News and Perspectives, 6(7), 564-566 (1993).
24. "Drug Discovery Strategies of Neuroprotection," J. A. Moyer and M. Abou-Gharbia, Current Opinion on New Investigational Drugs, 1-23 (1992).
25. "Markers of Neuronal Injury and Degeneration," M. Abou-Gharbia, E. Muth and T. Sulkowski, Drug News and Perspectives, 5(5), 317 (1992).
26. "WY-47,791, An Antipsychotic Agent," M. Abou-Gharbia, K. Marquis and T. Andree, Drugs of the Future, 16(11): 1008 (1991).
27. "Drug Discovery Forum: 5-HT₁ Receptor Agonists," M. Abou-Gharbia, Drug News and Perspectives, 4(6), 375 (1991).
28. "29th Annual Meeting of the American College of Neuropsychopharmacology Report," M. Abou-Gharbia, J. Moyer and T. Haskins, Drug News and Perspectives, 4(2), 124 (1991).
29. "AHR-11748, Anticonvulsant," M. Abou-Gharbia and J. Moyer, Drugs of the Future, 16(3), 201 (1991).
30. "IV Congress of the European College of Neuropsychopharmacology Report," M. Abou-Gharbia and E. Muth, Drug News and Perspectives, 4(10), 647 (1991).
31. "WY-50,324, Anxiolytic/Antidepressant," M. Abou-Gharbia and J. Moyer, Drugs of the Future, 15(11): 1093 (1990).
32. "Preclinical Antihistaminic Profile of WY-49,051. A New H₁-Antagonist," M. Abou-Gharbia, S.T. Nielsen, T. Andree, R. Tasse and S. Leventer, Drug Develop. Res., 21:63-78 (1990).
33. "WY-49,051, Non-sedating H₁-Antagonist," M. Abou-Gharbia, Drugs of the Future 15, 137 (1990).
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96. "Antiarrhythmic Cyclooct[b]indoles," Magid Abou-Gharbia, Meier E. Freed and Thomas J. Colatsky, U.S. Patent 4,546,193 (1985).
97. "1,4,5,6,7,8-Hexahydro-2-methyl-5-oxo-4-(2-thiazolyl)-3-quinoline carboxylic acid and 2-Phenyl (phenylmethyl)aminoethyl ester and Pharmaceutically Acceptable Salts," Magid Abou-Gharbia, U.S. Patent 4,546,186 (1985).
98. "Benzobicycloalkane Amines," Meier E. Freed and Magid Abou-Gharbia, U.S. Patent 4,540,806 (1985).
99. "Hexahydropyrrolo (1,2-a)quinoxaline and Azaquinoxaline Derivatives," Meier E. Freed and Magid Abou-Gharbia, U.S. Patent 4,446,323 (1984).

PRESENTATIONS AND INVITED LECTURES:

1. M. Abou-Gharbia, "Contrasting Tactics in Medicinal Chemistry: Discovery of Innovative Small Molecule Therapeutics," University of Pennsylvania Symposium Honoring Prof. Madeleine Joullie, University of Pennsylvania, Philadelphia, PA, May 2, 2007.
2. M. Abou-Gharbia, "Contrasting Tactics in Medicinal Chemistry: Discovery of Innovative Small Molecule Therapeutics," IBN Sina Conference, Luxor, Egypt, February 17-20, 2007.
3. M. Abou-Gharbia, "Contrasting Tactics in Medicinal Chemistry: Discovery of Innovative Small Molecule Therapeutics," Temple School of Pharmacy, Philadelphia, PA, February 28, 2007.
4. M. Abou-Gharbia, "Contrasting Tactics in Medicinal Chemistry: Discovery of Innovative Small Molecule Therapeutics," Ibn Sina Conference, Luxor, Egypt, February 17-20, 2007.
5. M. Abou-Gharbia, "Multidimensional Lead Optimization: Discovery of Innovative Small Molecule Therapeutics," Lecture at the Center for Drug Discovery (CCD), Northeastern University, Boston, MA, October 26, 2006.
6. M. Abou-Gharbia, "Discovery of Innovative CNS and Anticancer Small Molecules Therapeutics," Qatar University, Doha, Qatar, September 19, 2006.
7. M. Abou-Gharbia, "Strategies for Lead Identification and Optimization: Discovery of Innovative Medicines," Lecture at the University of Hyderabad, Hyderabad, India, August 2, 2006.
8. M. Abou-Gharbia, "Multidimensional Lead Optimization: Discovery of Innovative Small Molecule Therapeutics," Cyprus Conference on Chemistry, Biology, & Medicine (CBM'06), Paphos, Cyprus, May 28-June 1, 2006.
9. M. Abou-Gharbia, "Innovative Pathways for a Healthier World," BioVision Alexandria 2006, Alexandria, Egypt, April 26-28, 2006.
10. M. Abou-Gharbia, "Public/Private Partnerships: Building Bridges in the Pharmaceutical Industry to Align Commercial Value with Public Need," CEO Panel, BioVision Alexandria 2006, Alexandria, Egypt, April 26-29, 2006.
11. M. Abou-Gharbia, "Innovation Through Partnership: A Pharma Perspective," Qatar Foundation Conference, Doha, Qatar, April 24-26, 2006
12. M. Abou-Gharbia, "New Protein and Small Molecule Therapeutics," Bringing Sciences in Italy: Wyeth Update on Neurosciences Conference organized by Wyeth, Italy and the University of Milan, Milan, Italy, March 6, 2006.
13. M. Abou-Gharbia, "Innovation Through Partnership," invited participant, Rockefeller Foundation Conference "Ethics Meets the Marketplace: Best Practices in Public-Private Partnerships to Adapt Animal and Agricultural Biotechnology to the Needs and Conditions of the Developing World", Bellagio, Italy, October 3-7, 2005.

14. M. Abou-Gharbia, "Innovation Through Partnership: Chemistry Contract Research, Wyeth Experience". Invited lecturer at 2005 MidAtlantic Bio Conference, Ronald Reagan Center, Washington, DC, October 26-27, 2005
15. M. Abou-Gharbia, "A Future Outlook of Chemical Enterprise: A Pharmaceutical Industry Perspective," invited lecturer, 37th MARM Session "Enterprise 2015: Chemistry At Cross Road of Science", Rutgers University, New Brunswick, NJ, May 23-28, 2005
16. M. Abou-Gharbia, "A Future Outlook of Chemical Enterprise: A Pharmaceutical Industry Perspective," invited lecturer, 2005 SAPA Pharmaceutical R&D Symposium for Professional Development, Bridgewater Manor, NJ, May 13, 2005.
17. M. Abou-Gharbia, "Future Outlook of Chemical Enterprise 2015: A Pharmaceutical Industry Perspective", invited plenary lecture, Presidential Event Symposium, ACS 229th National meeting, San Diego, March 13, 2005.
18. M. Abou-Gharbia, "Success stories: Small Molecules, "Innovation Pathways for a Healthier World," Dubai, UAE, April 13, 2005 and Cairo, Egypt, April 16, 2005.
19. M. Abou-Gharbia, "Strategies For lead Identification And Optimization: Discovery of Innovative Medicines For the 21 Century", invited lecturer, School of Pharmacy, Ain Shams University, Cairo, Egypt, April 17, 2005
20. M. Abou-Gharbia, "Medicinal Chemistry Strategies for the Discovery of Novel CNS Therapeutics," invited lecturer, Restoring Function to the Damaged Brain Scientific Symposium, University of Perugia, Perugia, Italy, October 7-8, 2004
21. M. Abou-Gharbia, "Design and Synthesis of Novel CNS Therapeutics for the Treatment of Neurodegenerative Disorders," invited lecturer, Medicinal Chemistry Lecture Series, University of Ferrara, Ferrara, Italy, October 11-13, 2004.
22. M. Abou-Gharbia, "Design and Synthesis of Novel CNS Therapeutics for the Treatment of Neuropsychiatric Disorders," invited lecturer, Medicinal Chemistry Lecture Series, University of Ferrara, Ferrara, Italy, October 11-13, 2004.
23. M. Abou-Gharbia, "Strategies for Lead Identification and Lead Optimization: Discovery of New Drug Candidates," invited lecturer, Department of Chemistry, University of Ferrara, Ferrara, Italy, October 11-13, 2004.
24. M. Abou-Gharbia, "Challenges in Drug Discovery: Discovery and Synthesis of Novel Drug Candidates," invited lecturer, Plenary lecture at the International Conference on Advances in Synthetic, Medicinal and Combinatorial Chemistry (ASCMC., Moscow, May, 6, 2004.
25. M. Abou-Gharbia, "Impact of Chemical & Screening Technologies in Drug Discovery," invited lecturer, BioVision Alexandria 2004, Alexandria, Egypt, April 3-6, 2004.
26. M. Abou-Gharbia, "A Future Outlook of Chemical Enterprise: A Pharmaceutical Industry Perspective," invited lecturer, Presidential Event Symposium, 229th ACS National Meeting, San Diego, CA, March 14, 2004.
27. M. Abou-Gharbia, "Overview of Drug Discovery and Development: Future of Biotechnology and the Pharmaceutical Industry in Egypt and the Middle East" invited lecture, Ministry of Health, Cairo, Egypt, January 1, 2004.

28. M. Abou-Gharbia, "Synthesis and Structure-activity relationships of a series of bicyclic-1-3-dione derivatives as Kv1.1/kv β 1 potassium channel disinactivators," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
29. M. Abou-Gharbia, "Synthesis and SAR of a series of cyclic-1-3-diones as KV1.1Kv β 1 potassium channel disinactivators possessing anticonvulsant activity," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
30. M. Abou-Gharbia, "Substituted herocyclicdione amide derivatives as potent voltage-gated potassium channel disinactivators," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
31. M. Abou-Gharbia, "Fused bicyclic dione derivatives as KV1.1Kv β 1 potassium channel disinactivators with anticonvulsant activity," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
32. M. Abou-Gharbia, "Design, synthesis and structure-activity relationships of a series of 3-benzoylimidazolidine-2,4-dione derivatives as a KV1.1Kv β 1 potassium channel disinactivator," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
33. M. Abou-Gharbia, "Cinnamoylimidazolidine-2-4-dione derivatives as potent voltage-gated potassium channel modulators for use as anticonvulsants," Abstract, ACS 228th National Meeting, Philadelphia, PA, August 22-26, 2004.
34. M. Abou-Gharbia, "Tiplaxin, a novel, orally efficacious inhibitor of Plasminogen activator inhibitor-1: Design, synthesis and preclinical characterization," Abstract, ACS 227th National Meeting, Anaheim, CA, March 28-April 1, 2004.
35. M. Abou-Gharbia, "Contrasting Tactics in Medicinal Chemistry: The Discovery of Novel Therapeutic Agents," invited lecturer, University of Perugia, Italy, January 21, 2003.
36. M. Abou-Gharbia, "Medicinal Chemistry Approaches toward the Discovery of Novel Therapeutic Agents," invited lecturer, University of Ferrara, Italy, January 23, 2003.
37. M. Abou-Gharbia, "Drug Discovery Today: A Chemical Sciences Prospective," Invited Keynote Speaker, 1st SAPA-GP Annual Conference, Blue Bell PA, October 19, 2002.
38. M. Abou-Gharbia, "Optimization of Natural Products Leads into Drug Candidates: Discovery of MylotargTM, CCI-779 and GAR-936," Plenary Lecture, IUPAC Conference on Biodiversity, Anatalya, Turkey, November 3, 2001.
39. M. Abou-Gharbia, "Impact of Chemical Sciences Technologies in Drug Discovery," POCC Award Address, Philadelphia Organic Chemists Club Biennial Day, University of Pennsylvania, May 31st, 2001.
40. M. Abou-Gharbia, "Recent Advances in the Discovery of Novel Therapy for the Treatment of Neuropsychiatric and Neurodegenerative Disorders," invited lecturer, Wayne State University, School of Pharmacy, February 7, 2001.
41. M. Abou-Gharbia, "Strategies for Lead Optimization: Discovery of New Drugs," invited lecturer, Graduate course in Medicinal Chemistry Lecture Series, Boston University, February 2, 2001.

42. C.P. Miller, L. M. Greenberger, T. Annable, M.D. Collini, B. D. Tran, B.S. Komm, P. Frost, J. P. Yardley, R.C. Lyttle and M. Abou-Gharbia, "Discovery and Preclinical Pharmacology of ERA-923, a new SERM for the Treatment of Estrogen-receptor Positive Breast Cancer," American Chemical Society, 221st National Meeting, San Diego, CA, April 3, 2001.
43. M. Abou-Gharbia, "Strategies for Lead Optimization: Discovery of New Drugs," Earle B. Barnes Award Address, American Chemical Society, San Diego, CA, April 3, 2001.
44. M. Abou-Gharbia, "Pharmaceutical R&D: The Future of Drug Industry in Egypt," Lecture at the 27th International Conference of Pharmaceutical Society, Cairo, Egypt, January 2, 2001.
45. M. Abou-Gharbia, "FDA Requirements for the Development of New Drugs: The Approval Process," Invited Lecture at the Center for Drug Policy, Ministry of Health, Cairo, Egypt, January 4, 2001.
46. M. Abou-Gharbia, "Medicinal Chemistry Approaches for Optimization of Early Leads into Drug Candidates: The Discovery of Calicheamicin, Rapamycin and EAA-090", Plenary Lecture, Intern. Congress of Heterocyclic Chemistry, Alexandria, Egypt, March 27, 2000.
47. M. Abou-Gharbia, "Effexor, Discovery and Preclinical Profile," Effexor Forum in conjunction with the Effexor Launch in the Middle East, Dubai, United Arab Emirates, April 22, 1999.
48. M. Abou-Gharbia, "The Costly Road of Drug Discovery and Development and Drug Counterfeiting," Plenary Lecture, WHO Workshop, National Organization of Drug Control and Research, Cairo, Egypt, April 26, 1999.
49. M. Abou-Gharbia, "Chemical Sciences, Organizational Structural and Medicinal Chemistry Approaches Towards the Discovery CNS Active Agents," School of Pharmacy, Cairo University, April 28, 1999.
50. M. Abou-Gharbia, "Product Withdrawals and Missed Opportunities," 26th International Conference of Pharmaceutical Sciences, Cairo, Egypt, December 9, 1998.
51. M. Abou-Gharbia, "The Process of Drug Discovery and Development: From Bench to Market," 26th International Conference of Pharmaceutical Sciences, Cairo, Egypt, December 9, 1998.
52. M. Abou-Gharbia, "Bioisosteric Replacement Strategies in CNS Drug Discovery," 3rd Joint Technical Conference, Shanghai Institute of Organic Chemistry, Shanghai, China, November 1, 1997.
53. M. Abou-Gharbia, "The Discovery of Novel Therapeutic Agents for the Treatment of CNS Disorders," Award Presentation, American Chemical Society, Philadelphia Section, University of Pennsylvania, October 23, 1997.
54. M. Abou-Gharbia, "3,4-Diamino-3-Cyclobutene-1,1-Dioxide, A Versatile Template for Bioisosteric Replacements," Cyanamide Agricultural Research, Schwabenheim, Germany, October 15, 1997.
55. C.A. Hoffman, W. Childers, E. Podlesny, M. Abou-Gharbia, R. Tasse, D. Kowal, D. Bramlett, J. Moyer and C.A. Boast, "WAY-126251, A Potential Neuroprotective Agent

- With a Unique Pharmacological Profile," 27th Annual Meeting of Society of Neuroscience, New Orleans, LA., October 25, 1997.
56. T.H. Andree, T. Wasik, C. Ennis, R. Scerni, T. Spangler, G. Stack, L. Cortes-Burgos, E. Muth, J. Moyer and M. Abou-Gharbia, "The Neuropharmacological Profile of the Dopamine D₂ Partial Agonist WAY-127312," 27th Annual Meeting of Society of Neuroscience, New Orleans, LA., October 25, 1997.
 57. M. Abou-Gharbia, "Bioisosteric Replacement Strategy in Drug Discovery," Symposium on Chemistry and Medicine, University of Pennsylvania, Philadelphia, PA, March 17, 1997.
 58. M. Abou-Gharbia, "Recent Approaches for the Design and Discovery of Novel Agents for the Treatment of Psychotropic and Neurodegenerative Disorders," Invited lecturer, Med. Chem. Course, Princeton University, March 27, 1997.
 59. M. Abou-Gharbia, "Enhancing the Drug Discovery R&D Process," presented at the National Organization for Drug Control and Research, Cairo, Egypt, January 1997.
 60. M. Abou-Gharbia, "Chemical Approaches in the Design of Novel Psychotropic Agents," Drug Research Unit, Temple University, Philadelphia, PA, December 1996.
 61. M. Abou-Gharbia, "Streamlining of the R&D process: Effexor, A Newly Marketed Rapid Onset Antidepressant as an Example of the Accelerated R&D Process," presented at the 25th Conference of the Pharmaceutical Society (in conjunction with the approval of Effexor for marketing in Africa and Mediterranean countries., Cairo, Egypt, December 1996.
 62. M. Abou-Gharbia, "Neurodegenerative Disorders," Organizer and session Chair, Plenary lecture at the Int. Conf. on New Methods in Drug Research, Limasole, Cyprus, May 1994.
 63. M. Abou-Gharbia, "Advances in Antipsychotic and Dopamine Research," Organizer and Session Chair, presented at Gordon Research Conference in Med. Chem., New London, NH, August 1993.
 64. M. Abou-Gharbia, T. Andree, K. L. Marquis, J. A. Moyer, J. T. Haskins and E. Muth, "WY-47,791 HCl: Preclinical Profile of a Novel Potential Antipsychotic Agent," will be presented at XVIIth C.I.N.P. Congress, Nice, France, June 28, 1992.
 65. M. Abou-Gharbia, "New Generation of Non-benzodiazepine Anxiolytics," presented at School of Pharmacy, Cairo University, December 1991.
 66. E. Muth, J. Moyer, J. T. Haskins, M. Abou-Gharbia, R.J. Stephens and T. J. Ward, "Zalospirone, WY-50,325 and WAY-100,289: New Serotonergic Agents with Psychotherapeutic Potential," presented at the ECNP, Monte-Carlo, Monaco, October 6, 1991.
 67. C. Boast, A. Sabb, S. Leventer, M. Abou-Gharbia, F. Storch, H. Morris and T. Andree, "Comparison of the M1 Selective Agonists, AF-102B and Pyridazino[4,5b]indolizine, AY-26,514," presented at the 2nd International Springfield Symposium on Advances in Alzheimer Therapy, Springfield, Illinois, May 3, 1991.

68. M. Abou-Gharbia, J. Moyer, T. Andree and E. Muth, "Preclinical Profile of WY-47,791: A Novel Antipsychotic Agent with Dopaminergic, Serotonergic and Sigma Receptor Activities," presented at the ACNP, San Juan, Puerto Rico, December 10, 1990.
69. J. Moyer, T. Andree, C. Boast, J. T. Haskins, M. Abou-Gharbia and E. Muth, "WY-50,324: A Novel Anxiolytic/Antidepressant with Partial 5-HT_{1A} Agonist and 5-HT₂ Antagonist Activity," presented at the ACNP, San Juan, Puerto Rico, December 10, 1990.
70. M. Abou-Gharbia, J. Moyer, "WY-50,324: A Novel Anxiolytic-Antidepressant Agent," presented at the Gordon Research Conference, Med. Chem. August 6, 1990.
71. R. Notvest, T. Emery, T. Sailer, J. Simmonds, C. Boast, C. Hoffman, M. Abou-Gharbia and W. Childers, "The anticonvulsants AY-12,316 and AY-21,127 and NMDA antagonists with anti-ischemic properties," presented at the International Symposium Excitatory Amino Acids 1990, Abs. 98, Montegrotto, Padova, Italy, March 21, 1990.
72. J. A. Moyer, R. F. Kucharik, T. H. Andree, S. M. White, D. Grimes, R. A. Scerni, R. L. Fenichel and M. Abou-Gharbia, "Psychopharmacological Profile of WY-50,324 - A Novel Anxiolytic - Antidepressant Agent," presented at the 19th Annual Meeting of the Society of Neuroscience, Phoenix, Arizona, October 29, 1989.
73. M. Abou-Gharbia, "Novel Serotonergic Agents in Psychotherapy," presented at the Medical College of Virginia, Richmond, Virginia, October 29, 1989.
74. H. Morris, S. M. White, A. T. Shropshire, M. Abou-Gharbia, C. A. Boast and J. A. Moyer, "Behavioral Characterization of the Novel Anxiolytic-Antidepressant Agent WY-50,324," presented at the 19th Annual Meeting of the Society of Neuroscience, Phoenix, Arizona, October 29, 1989.
75. J. A. Moyer, T. H. Andree, J. P. Haskins, M. Abou-Gharbia and E. Muth, "Psychopharmacological Profile of WY-47,846 - A Putative Non-benzodiazepine Anxiolytic Agent," presented at the 18th Annual Meeting of the Society of Neuroscience, Toronto, Ontario, Abst. # 87.7, 1988.
76. M. Abou-Gharbia, S. T. Nielsen, L. Burns, P. Dove, C. Buonato, M. Webb, J. Hand and J. Chang, "WY-49,051, 7-[3-[4-(diphenylmethoxy.-1-piperidinyl)propyl]-3,7-dihydro-1,3-dimethyl-1H-purine-2,6-dione, A Novel Agent with Antihistamine properties," presented at the 72nd Annual FASEB Meeting, Las Vegas, Nevada, May 1988.
77. Cesario O. Tio, L. A. Lihotz, M. C. Dyroff, J. Tokolics, M. Abou-Gharbia, J. P. Yardley and S. Sisenwine, "Metabolic Disposition of 8-fluoro-2,3,4,5-tetrahydro-2-[3-(3-pyridinylpropyl)-1H-pyrido[4,3-b]indol Monohydrochloride (WY-47,384. in Male Rats," presented at the 72nd Annual FASEB Meeting, Las Vegas, Nevada, May 1988.
78. T. H. Andree, E. A. Muth, M. Abou-Gharbia, R. Mastroni, D. Jones and J. T. Haskins, "Preclinical Neuropharmacological Profile for WY-47,847: A Potential Anxiolytic Agent," presented at the ASPET Meeting, Honolulu, Hawaii, August, 1987.
79. M. Abou-Gharbia, U. Patel, J. Moyer, T. Andree and E. Muth, "Synthesis and Antipsychotic Activity of Substituted γ -Carbolines," presented at the 11th International Society of Heterocyclic Chemistry, Heidelberg, Germany, August 16-21, p. 6.12, 1987.

80. T. H. Andree, T. Fedora, K. Cilmi, M. Abou-Gharbia and E. Muth, "Neurochemical Profile of the potential Antipsychotic Compound WY-47,384," presented at the 16th Annual Meeting of the Society for neuroscience, Washington, D.C., November 9-14, 1986.
81. J. A. Moyer, M. Abou-Gharbia and E. A. Muth, "In Vivo Preclinical Antipsychotic Profile of the Gamma-Carboline WY-47,384," presented at the 16th Annual Meeting of the Society for Neuroscience, Washington, D.C., November 9-14, 1986.
82. M. Abou-Gharbia, D. M. Ketcha, D. Zacharias and D. Swern, "Reactions of Ketenes with Sulfilimines. Synthetic Routes to Oxazolinones and Indolinones," presented at the 10th International Congress of Heterocyclic Chemistry, Waterloo, Canada, August 11-16 (1985., Abs. No. P8-225.
83. M. Abou-Gharbia, M. E. Freed, R. J. McCaully and R. Wendt, "Synthesis of Tetrahydropyrrolo[1,2-a]quinoxalines and Pyridopyrazines and their Calcium Blocking and Antihypertensive Activities," presented at the 187th American Chemical Society National Meeting, St. Louis, Missouri, April 8-13, 1984, Abs. Med. Chem. No. 18.
84. D. M. Ketcha, M. Abou-Gharbia and D. Swern, "A New Synthesis of Oxazolinones: Reaction of Ketenes with Sulfilimines," presented at the Gordon Research Conference on the Chemistry of Heterocyclic Compounds, New Hampton, New Hampshire, July 12-16, 1982.
85. M. Abou-Gharbia, L. Pashko, A. Schwartz and D. Swern, "Epiandrosterone-3 β -alkylsulfonates: Potential Anticancer and Antiobesity Agents," presented at the 183rd American Chemical Society Meeting, Las Vegas, Nevada, March 28 - April 2, 1982, Abs. Med. Chem. 37.
86. M. Abou-Gharbia, P. Magee and D. Swern, "Synthesis and Metabolic Studies of Nitrosocimetidine and Streptozotocin," presented at the 8th International Congress of Heterocyclic Chemistry, Graz, Austria, August, 1981.
87. M. Abou-Gharbia, D. Ketcha and D. Swern, "Reactions of Ketenes with Sulfilimines," presented at the Amer. Chem. Soc., 181st National Meeting, Atlanta, Georgia, March 1981.
88. A. Schwartz, L. Pashko, M. Abou-Gharbia and D. Swern, "Dehydroepiandrosterone and Related Steroids: A New Class of Antitumor Promoters," presented at the AACR, 71st Annual Meeting, San Diego, May 1980.
89. M. Abou-Gharbia, A. Schwartz, L. Pashko and D. Swern, "Improved Synthesis of the Biologically Active Sulfolipid. Sulfatidyl-Dehydroepiandrosterone, and Related Compounds," presented at the ISF-AOCS Congress, Abst. #291, New York, April 1980.
90. M. Abou-Gharbia, and M. M. Joullié, "Synthesis of Spirofluorenes via Ketene Adducts," presented at the Amer. Chem. Soc., 178th National Meeting, Abst. #160, Washington, D.C., September 1979.
91. M. Abou-Gharbia and M. M. Joullié, "Reaction of Ketenes with Nitrones," presented at the EUCHEM Conference, France, June 1979.
92. M. Abou-Gharbia and M. M. Joullié, "The Regioselectivity of the Cycloadditions of Ketenes with N-Alkyl and N-Arylnitrones," presented at the Amer. Chem. Soc., 174th National Meeting, Chicago, Illinois, August 1977.