CURRICULUM VITAE

ALEXANDROS MAKRIYANNIS, Ph.D.

*George D. Behrakis Chair in Pharmaceutical Biotechnology,*

*Professor of Pharmaceutical Science, Chemistry and Chemical Biology*

*Director of the Center for Drug Discovery, Northeastern University*

**EDUCATION**:

1960 B.Ph. Chem., University of Cairo

1967 Ph.D. (Medicinal Chemistry), University of Kansas (Supervisor E.E. Smissman)

1967-69 Post-doctoral Fellow (Synthetic Organic Chemistry), University of California, Berkeley, CA (Supervisor H. Rapoport)

**PROFESSIONAL SUMMARY**:

1969-70 Senior Chemist, *Smith, Kline and French Laboratories*, Philadelphia, PA (Supervisor J. Wilson)

1971-72 Research Associate, Department of Biochemistry and Pharmacology, *Tufts Medical School*, Boston, MA (Supervisor H. Mautner)

1972-74 Assistant Professor, Department of Biochemistry and Pharmacology, *Tufts Medical School*, Boston, MA

1974-80 Assistant Professor of Medicinal Chemistry, *University of Connecticut*, Storrs, CT

1980-86 Associate Professor of Medicinal Chemistry, *University of Connecticut*, Storrs, CT

1981-87 Head, Medicinal Chemistry and Pharmacognosy, School of Pharmacy, *University of Connecticut*, Storrs, CT

1983-96 Visiting Scientist, F. Bitter National Magnet Laboratory, *Massachusetts Institute of Technology,* Cambridge, MA

1985-91 Director and Founder, Institute of Organic and Pharmaceutical Chemistry, *National Hellenic Research Foundation* (Greece)

1986-04 Professor of Medicinal Chemistry and Pharmacognosy, *University of Connecticut*, Storrs, CT

Director of the Drug Design Program; Critical Technologies Initiative, *State of Connecticut*

1994-04 Professor of Molecular and Cell Biology (joint), *University of Connecticut*, Storrs, CT

1997-04 Director, Center for Drug Discovery, *University of Connecticut*, Storrs, CT

1997-04 Professor of Pharmacology (joint), *University of Connecticut Health Center*, Farmington, CT

1996-04 Board of Trustees’ Distinguished Professor of Medicinal Chemistry and Molecular and Cell Biology, *University of Connecticut*, Storrs, CT

2003 Founder, *MAKScientific* (Drug Discovery Start-up)

2004- Adjunct Professor, Dept. Pharm. Sciences, *University of Connecticut*, Storrs, CT

2004- George D. Behrakis Chair in Pharmaceutical Biotechnology, Professor of Chemistry & Chemical Biology and Pharmaceutical Sciences, and Director of the Center for Drug Discovery, *Northeastern University*, Boston, MA

2006 Founder, *Pafos Pharmaceuticals* (Drug Discovery Start-up)

2014- Distinguished Adjunct Professor, Dept. of Chemistry, *King Abdulaziz University*, Saudi Arabia

**HONORS**:

 McNeil Endowment Fellowship (1964-67)

 Research Scientist Award, NIDA (1990-95; 1995-2000)

 Fellow, American Association for the Advancement of Science (1993)

 President, International Cannabinoid Research Society (ICRS) (1993)

 Distinguished Scientist Award, University of Connecticut Alumni (1996)

 Fellow, American Association of Pharmaceutical Sciences (1997)

 National Institute of Health MERIT Awards (1997-2007, 2007-2017)

 Senior Scientist NIDA Award (2000-2011)

 Distinguished Professor, University of Connecticut, Board of Trustees (2002)

Research Achievement Award in Drug Design and Discovery, American Association of

 Pharmaceutical Scientists (AAPS) (2002)

 Behrakis Trustee Chair in Pharmaceutical Biotechnology, Northeastern University (2004)

 Honorary Doctorate of Philosophy, University of Athens, Greece (2005)

Recognition of Scholarly or Creative Work by Northeastern Faculty and Staff, Northeastern University (2005)

 Mechoulam Life Achievement Award in Cannabinoid Research (ICRS) (2006)

 Distinguished Patent Award, University of Connecticut (2007)

 Kenneth E. Avis Award in Medicinal Chemistry (2007)

 Marquis Who’s Who in Science and Engineering (2007)

ACS Research Lifetime Achievement Award in Medicinal Chemistry (2012)

Annual NU Award for Excellence in Research and Creativity (2012)

ACS Medicinal Chemistry Hall of Fame (2013)

Highly Cited Researcher, Thomson Reuters (2014)

Distinguished Professor, Northeastern University (2015)

AAPS Distinguished Pharmaceutical Scientist Award (2015)

**FIELDS OF SPECIALIZATION**:

Target-based drug design and synthesis; chemical biology; chemical pharmacology; membrane and protein biophysics (LC/MS/MS-NMR); proteomic and metabolomic LC/MS technologies

**RESEARCH INTERESTS**:

Cannabinergic agents; drugs of abuse; structure and function of G-protein coupled receptors and enzymes; enzyme inhibitors; drug-membrane interactions; neurosteroids; endocannabinoid biomarkers

**CONSULTING ACTIVITIES**:

Glaxo Wellcome, Bristol Myers, Genaissance Pharmaceuticals (Co-Chair, Scientific Advisory Board), Medochemie (Cyprus), Pfizer, Synaptic Corporation, MAKScientific (Chairman Scientific Advisory Board), Forest Laboratories, Inc., Arqule Pharmaceuticals, Biogen Idec, Aileron Therapeutics, Nestle, Wyeth, Ischemix, Inc.

**ADVISORY APPOINTMENTS**:

 Consultant Intramural NIAAA Biophysics Research Program (1985-87)

 Ad Hoc Member, NIDA Study Section (1985-89)

 Senior Advisor National Research Council of Greece (1985-present)

 NIDA Special Rev. Committee (1987-2000)

 Member of Ad Hoc Committee NIAID (1990-1992)

 Member, NIDA-L Medications Development Review Committee (1998-2004); Chair (2001-2004)

 Member, NIH MCDN-5 Review Committee (1998-2008)

 American Association of Pharmaceutical Scientists (AAPS)-Chair, Division of Medicinal Chemistry and Natural Products (1998-99); Chair, Division of Drug Design and Discovery (1999-00)

 Member, Nat. Advisory Council for the Center for Medicinal Cannabis Research (2001-present)

 Member, External Review Board, Institut de Recherches Cliniques de Montreal (2006-present)

 Member, Scientific Review Board of the Institute for the Study of Aging, Alzheimer’s Drug Discovery Foundation (2007-present)

 Member, NIH Drug Discovery Scientific Study Section (2008-present)

 Member of Industry Consulting Board, Tufts Clinical and Translational Science Institute, Tufts

 Medical Center, Boston, MA (2009)

 Member, Drug Discovery for the Nervous System Review Group (2009-present)

 Member, Awards Committee, American Association of Pharmaceutical Scientists (AAPS) (2010-

 present)

 Consultanships with Pharm. Industries

 Member, Alzheimer’s Drug Discovery Foundation (2016)

**EDITORIAL ACTIVITIES**:

1999-04 PharmSci, Senior Associate Editor for Medicinal Chemistry

2001-06 Member, Editorial Board, Il Farmaco

2002-07 Member, Editorial Board, Journal of Medicinal Chemistry

2002- Member, Editorial Advisory Board, Letters in Drug Design and Discovery

2010- Member, Editorial Board, Global Journal of Organic Chemistry

2014- Member, Editorial Board, American Journal of Pharmaceutical Sciences

2014- Member, Editorial Board, Journal of Nanomedicine Research

2015- Member, Editorial Board, Computational Drug Discovery

**Alexandros Makriyannis, Ph.D.**

**Founding Director – Center for Drug Discovery**

**Accomplishments Summary 2005 – December, 2017**

**Overview**

Directed by Dr. Alexandros Makriyannis, the Center for Drug Discovery is dedicated to:

* conducting intensive research aimed at discovering novel medications that address important medical needs
* devising approaches and technologies that improve drug-discovery efficiency and success
* developing vigorous educational and research collaborations with the pharmaceutical and biotechnology industries and translational research centers
* expanding its unique educational component for training students and postdoctoral fellows in the art and science of drug discovery and educating the public on disease processes and therapeutic frontiers

These activities have been supported by more than **93 active members of the CDD, not including volunteers and summer interns: undergraduate students (11), predoctoral (21), postdoctoral or senior scientists (22), faculty researchers, including faculty fellows (6), affiliated faculty (28), lab technicians or staff (5)**, within an infrastructure that includes **state-of-the-art** laboratories for **chemical synthesis, cell biology** and **tissue culture, biochemistry, molecular modeling, biophysical methods (NMR, computational), mass spectroscopy** (proteomics), and behavioral studies.

**Grants (updated 12/7/17)**

Seventy (70) awards funded since moving to NU

Twenty-one (21) currently active grants/subcontracts (primarily funded by National Institutes of Health/National Institute on Drug Abuse and National Cancer Institute and with the Department of Defense)

Fifty-five (55) new awards issued to NU

Total 2004-Present All Awarded Funds (Current, Past, Future): $62.1 M

Total 2004-Present All Funds Received by NU: $54.7 M

Total 2004-Present Awarded Indirect Costs: $16.3 M (total captured to date\*) $14.7M\*

Total Awarded Funds most recent full year FY2017: $3.6 M

Total Awarded Funds to day for FY2018: $3.7 M

*(\*IDC collected from expenditures on all awards for all periods)*

**Infrastructure (plus $600,000.00 value of equipment brought to NU)**

Design, build-out, and equip state-of-the-art laboratories for chemical synthesis, biochemistry, tissue culture, NMR spectroscopy, mass-spectroscopy, and behavioral studies

**Publications (see attached list)**

Over 247 published papers since 2005 (excluding abstracts) in leading biomedical journals