

# Curriculum Vitae

## Mattia M. Migliore, Ph.D. BsPharm

### Work Address

179 Longwood Avenue W329  
Boston, MA 02115  
Tel. (617) – 879-5924  
Fax (617) - 732 - 2228  
Email: [Mattia.Migliore@mcphs.edu](mailto:Mattia.Migliore@mcphs.edu)  
[MMigliore@Partners.org](mailto:MMigliore@Partners.org)

### Home Address

59 Oliver St  
Malden MA 02148  
Email: [MattiaM0811@gmail.com](mailto:MattiaM0811@gmail.com)  
Mobile: 339-927-6286

## Profile

Mattia Migliore is a pharmacologist and a dedicated educator with eight years of large and small classroom experience, at both the undergraduate and graduate levels. A Massachusetts licensed registered pharmacist, Dr. Migliore has nineteen years of experience working at a Harvard Medical School-affiliated teaching hospital, where she specializes in outpatient Anticoagulation Management. Dr. Migliore's research interests and efforts have included the treatment of Parkinson's disease, and drug delivery to the brain via the intranasal route of administration, and Autism Spectrum Disorders. Her work in this field has led to the awarding of two Michael J. Fox Foundation for Parkinson's disease Research grants, and the donation of valuable laboratory reagents by Amgen (GDNF protein) and by Copernicus Therapeutics Inc.

### LICENSURE:

Commonwealth of MA Board of Pharmacy: 23684 Exp. 12/31/2018  
Commonwealth of MA Public Health Division of Food and Drugs: MM0865204P Exp. 03/06/2018  
National Provider Identifier: 1295047603

### EDUCATION:

Ph.D. in Pharmaceutical Sciences with a major in Pharmacology and a specialization in Nanomedicine. Northeastern University, Bouve College. Boston MA 02115.

M.S. in Pharmaceutical Sciences with a major in Pharmacology. Northeastern University, Bouve College. Boston MA 02115.

B.S. in Pharmacy. Massachusetts College of Pharmacy and Health Sciences, Boston MA 02115.

### CERTIFICATE AND TRAINING PROGRAMS:

- Attended and received a certificate of completion for IACUC 101, October 24, 2010; 6.5 CE hours.
- APhA Immunization certificate, September 2, 2010.
- Attended the NIH OLAW (Office of Laboratory Animal Welfare) workshop, October 25, 2010.
  - Completed a Disease State Management Program in Asthma Management and earned a certificate in

- Asthma Education, 1999.
- Attended and received a certificate of completion for the April 15, 2010 Laboratory Animal Enrichment Conference.
- Completed a Clinical Clerkship at Children's Hospital Boston, Jan-March 1997.
- Completed an Ambulatory Externship at Walgreen's Pharmacy in Everett, March-May 1997.
- Completed a Pharmacy Internship at CVS Pharmacy (store #175) in Medford, 1995-1997.
- Completed a Pharmacy Internship at Boston Regional Medical Center in Stoneham, 1994-1997.

#### **ACADEMIC APPOINTMENTS:**

2012- Present: Associate Professor of Pharmacology and Toxicology  
 Department of Pharmaceutical Sciences  
 MCPHS University

2008 - 2012: Assistant Professor of Pharmacology and Toxicology  
 Department of Pharmaceutical Sciences  
 Massachusetts College of Pharmacy and Health Sciences

2008 - 2009: Interim Program Director of the Pharmacology and Toxicology B.S. program  
 Department of Pharmaceutical Sciences  
 Massachusetts College of Pharmacy and Health Sciences

2003 – 2004: Teaching Assistant  
 Department of Pharmaceutical Sciences  
 Northeastern University

#### **NON-ACADEMIC EMPLOYMENT HISTORY:**

##### Brigham and Women's Hospital Anticoagulation Service

2001-2003 (full-time) Clinical Pharmacist

2004-2013 (part-time) Clinical Pharmacist

2013-Present (part-time) Advanced Practice Clinical Pharmacist

Responsible for monitoring >3400 outpatients enrolled in our service for safety and efficacy of anticoagulation, as well as providing patient education on low molecular weight heparins (LMWH), unfractionated heparin, and warfarin. Additionally, I participated in the inpatient anticoagulation management of both cardiac and orthopedic patients.

1998-2001 Brigham and Women's Hospital Inpatient Pharmacy  
 Senior Staff Pharmacist (full-time)

Became an integral part of the medical interdisciplinary team. Worked in cardiology, neonatology, thoracics, general medicine, and orthopedics.

1997-1998 Brigham and Women's Hospital Inpatient Pharmacy  
 Staff Pharmacist (full-time)

Duties as described above

1997-1999      Boston Regional Medical Center Inpatient Pharmacy  
Registered Pharmacist (part-time)  
Monitored for therapeutic duplication, possible sensitivity and cross sensitivity reactions, drug-drug interactions, and drug-disease interactions. Adjusted dosing schedules according to the pharmacokinetic properties of the drug, patient's age, weight, and renal function.

## **LEADERSHIP ROLE IN GRADUATE EDUCATION:**

### **PSB 856: Neuropharmacology**

Co-designed and co-developed this graduate level course. This is a course designed to present basic and applied neuropharmacology in a functional context, emphasizing the anatomical and biochemical basis of treatment of neurological and psychiatric disorders. Course approved through Graduate Curriculum Committee, 2010.

### **PSB 518: Clinical Pharmacology I**

Course coordinator and instructor of this required course for the Physician Assistant Program.

### **PSB 520: Clinical Pharmacology II**

Course coordinator and instructor of this required course for the Physician Assistant Program.

## **LEADERSHIP ROLE IN UNDERGRADUATE EDUCATION:**

### **Anatomy and Physiology I, PSB 231**

Developed, coordinated, and taught this required course for BS Pharmaceutical Marketing and Management majors (now called the Pharmaceutical Health Care Business Program), Fall 2008.

### **Anatomy and Physiology II, PSB 232**

Designed and developed the course syllabus, which was approved by the Curriculum Committee in 2008. I was also the course coordinator and sole instructor for this required course for BS Pharmaceutical Marketing and Management majors (now called the Pharmaceutical Health Care Business Program), Spring 2009.

### **Human Physiology and Pathophysiology I, PSB 328**

Course coordinator and instructor of this required course for the PharmD program, the BS Pharmaceutical Sciences program, and the B.S. in Pharmacology and Toxicology program. This course is also an elective for Premed majors.

### **Human Physiology and Pathophysiology II, PSB 329**

Course coordinator and sole instructor of this required course for the PharmD program, the BS Pharmaceutical Sciences program, and the B.S. in Pharmacology and Toxicology program. This course is also an elective for Premed majors.

## **REPORT OF TEACHING:**

### **Graduate:**

Summer 2012-Present: PSB 872: Special problems in Pharmacology. Supervise pharmacology graduate students on their development and completion of their thesis research

2011-2015 PSB 856: Neuropharmacology; See above.

2011-Present Graduate Student Laboratory rotations; a laboratory rotation for graduate students, which teaches basic laboratory techniques, including animal handling and immunohistochemistry.

2010-2013: PAS 518 and 520: Clinical Pharmacology I and II; Lecturer in Clinical Pharmacology for Physician Assistant majors

2010-2015: INT 401: Seminar in Pharmacy Practice and Pharmaceutical Sciences II; Lecturer. This course provides a review of the professional pharmacy curriculum as part of the preparation for the Foreign Pharmacy Graduate Equivalency Examination (FPGEE).

2009-2014: PSB 826: Novel drug delivery systems II; Instructor for "Animal models of human disease."

2008-2010: PAS 518 and 520: Clinical Pharmacology I and II; Course coordinator and primary lecturer for  
Clinical Pharmacology for Physician Assistant majors

2009-2010: PPB 551: Pharmacotherapeutics Seminar I; Instructor for "A day in the life of the anticoagulation clinic."

### **Undergraduate:**

Spring 2016-Present: PSB 329 Human Physiology and Pathophysiology II; Course coordinator and sole instructor for a course with an enrollment of >320 students (see above)

Fall 2011-Present: PSB 403 Pharmacology and Toxicology Seminar III; The third of a three-part seminar-based course sequence discussed above.

Fall 2011-Present: PSB 530 Undergraduate Research Project; supervise undergraduate student laboratory research

2009-Present: PSB 328 and PSB 329 Human Physiology and Pathophysiology I and II; Course coordinator and instructor (see above)

Spring 2011-Present: PSB 371 Analytical Methods in Pharmacology and Toxicology II; The second part of a laboratory-based course sequence discussed above.

Fall 2011-Present: PSB 372 Analytical Methods in Pharmacology and Toxicology III; The third part of a laboratory-based course sequence discussed above.

Fall 2011-2014: PSB 375 Fundamentals of Drug Development; Lecturer. A course designed to teach the process of discovering and testing drug molecules as well as the design, manufacture, and testing of

pharmaceutical products.

Fall 2011-2014: PSB 462 Basic Pharmacology I; Lecturer of one third of the course. A lecture course designed to introduce the student to the science of pharmacology with emphasis on its application to basic science research.

Fall 2011-present: PSB 460 Toxicology I; Lecturer. A lecture course designed to introduce the student to the science of toxicology with emphasis on its application to basic science research.

Spring 2011-Present: PSB 402 Pharmacology and Toxicology Seminar II; The second of a three-part seminar-based course sequence discussed above.

Summer 2011: Summer Undergraduate Research (SURF) mentor: supervised and mentored a second year undergraduate Pharmacology/Toxicology student in the development and conduction of an in vitro pharmacology project.

Fall 2010-Present: PSB 370 Analytical Methods in Pharmacology and Toxicology I; The first of a three-part laboratory-based course sequence where students will be introduced to, and given the opportunity to perform more advanced behavioral and analytical techniques used in drug discovery and developmental research.

Fall 2010-Present: PSB 401 Pharmacology and Toxicology Seminar I; The first of a three-part seminar-based course sequence in which students will be introduced to the reading, evaluation, analysis, interpretation and presentation of scientific literature as it relates to Pharmacology and Toxicology.

Summer 2009: PSB 328 and PSB 329 Human Physiology and Pathophysiology I and II; Course coordinator and instructor (see previous).

## **PUBLICATIONS:**

- Bender TS, Migliore MM, Campbell RB, John Gatley S, Waszczak BL. Intranasal administration of glial-derived neurotrophic factor (GDNF) rapidly and significantly increases whole-brain GDNF level in rats. *Neuroscience*. 2015 Sep 10;303:569-76. doi: 10.1016/j.neuroscience.2015.07.016. Epub 2015 Jul 9. PubMed PMID: 26166725.
- MacRae, M., Macrina, T., Khoury, A, Migliore, M.M., Kentner, A.C. (in press). Tracing the trajectory of behavioral impairments and oxidative stress in an animal model of neonatal inflammation. Manuscript accepted for publication in *Neuroscience*, NSC-15-157, April 21st 2015.
- Connors EJ, Migliore MM, Pillsbury SL, Shaik AN, Kentner AC. Environmental enrichment models a naturalistic form of maternal separation and shapes the anxiety response patterns of offspring. *Psychoneuroendocrinology*. 2015 Feb;52:153-67. doi: 10.1016/j.psyneuen.2014.10.021. Epub 2014 Oct 30. PubMed PMID: 25437120.
- Migliore MM, Ortiz R, Dye S, Campbell RB, Amiji MM, Waszczak BL. Neurotrophic and neuroprotective efficacy of intranasal GDNF in a rat model of Parkinson's disease. *Neuroscience*. 2014 Aug 22;274:11-23. doi: 10.1016/j.neuroscience.2014.05.019. Epub 2014 May 17. PubMed

PMID: 24845869.

- Connors EJ, Shaik AN, Migliore MM, Kentner AC. Environmental enrichment mitigates the sex-specific effects of gestational inflammation on social engagement and the hypothalamic pituitary adrenal axis-feedback system. *Brain Behav Immun.* 2014 Jul 7. pii: S0889-1591(14)00185-8. doi: 10.1016/j.bbi.2014.06.020. [Epub ahead of print] PubMed PMID: 25011058.
- Migliore MM, Costantino RC, Campagna NA Jr, Albers DS. Educational and career goals of pharmacy students upon graduation. *Am J Pharm Educ.* 2013 Nov 12;77(9):187. doi: 10.5688/ajpe779187. PubMed PMID: 24249849; PubMed Central PMCID: PMC3831398.
- Campagna NA Jr, Migliore MM, Berman A. A new paradigm in health care curriculums: the pharmaceutical and health care business degree. *J Allied Health.* 2011 Fall;40(3):e45-8. PubMed PMID: 21927773.
- Migliore MM, Vyas TK, Campbell RB, Amiji MM, Waszczak BL. Brain delivery of proteins by the intranasal route of administration: a comparison of cationic liposomes versus aqueous solution formulations. *J Pharm Sci.* 2010 Apr;99(4):1745-61. doi: 10.1002/jps.21939. PubMed PMID: 19774660.
- Jing, Lin; Mahmoud, N.; Migliore, Mattia M., Kugler, J., Kelly, L.J.; Nitric oxide impairs cardiovascular responsiveness during anaphylactic shock in the rat. *Pharmacology Reviews and Communications* 1998, 10 (2): 125-134.

**Content Editor:**

- 2014-2015 New Investigator Award Reviewer for AACP.
- 2015-2016 Abstract reviewer for AACP
- One of two content editors for S.C. Publishing's course manuscript titled "Anticoagulant, Antiplatelet, and Thrombolytic Medications."
- One of two content editors for S.C. Publishing's course manuscript titled "Basic Respiratory Care Pharmacology."

**PRESENTATIONS:**

- Presented a Continuing Education (CE) lecture at the November 2014 Pharmaceutical Care Days: "Autism Spectrum Disorders: The Role of the Pharmacist.
- Presented a Continuing Education (CE) lecture at the November 2011 Pharmaceutical Care Days Part I: "Anticoagulation Update: New Alternatives to Warfarin" for pharmacists.
- Presented a Continuing Medical Education (CME) and CE lecture at the 2011 2<sup>nd</sup> Annual Stoklosa Symposium: "Anticoagulation Update: New Alternatives to Warfarin" for pharmacists, nurses, and physician assistants.
- Presented a Continuing Education (CE) lecture at the March 2010 Hygeia Day, a Lambda Kappa Sigma (LKS) event: "Parkinson's Disease: A Review of Current and Potential Treatments."

- Presented a Continuing Education (CE) lecture in 2003: “Advancing Strategies for Patient Management and treatment of DVT’s” for pharmacists.
- Attended the 2011 ASAHP (The Association of Schools of Allied Health Professions) conference in Scottsdale, AZ and presented a poster titled: “Students’ Goals Regarding Education/Career after Completion of the PharmD Program.”
- Attended the 2011 Experimental Biology Meeting and presented a poster titled: *Progress toward developing an intranasal gene therapy approach for CNS disorders.*
- Attended the ASAHP (The Association of Schools of Allied Health Professions) 2010 conference in Charlotte, NC and presented:
  - A. Oral presentation: *An Interactive Case-based Teaching Innovation.*
  - B. Poster presentation: *BS Pharmaceutical Marketing and Management Curriculum Development: Past, Present, and Future.*
- Experimental Biology Meeting abstract and poster presentation:
  - *Progress toward developing an Intranasal gene therapy approach for CNS disorders (2011).*
- Neuroscience abstract and poster presentations:
  - *Early life environmental enrichment affects maternal care and offspring social behavior following neonatal inflammation (2014).*
  - *Intranasal GDNF for Parkinson’s Disease: Next Steps in Preclinical Development (2012).*
  - *Progress toward developing an Intranasal gene therapy approach for CNS disorders (Supplemental studies; 2011).*
  - *Neuroprotective effects of intranasal GDNF in a rat model of Parkinson’s disease: Supplementary Studies (2009).*
  - *Intranasal administration of liposomal GDNF rapidly and significantly increases whole brain GDNF levels in rats (2009).*
  - *Correlation of autoradiographic and SPECT imaging of the dopamine transporter in a unilateral 6-hydroxydopamine (6-OHDA) rat model of Parkinson’s disease (2009).*
  - *Intranasal GDNF is neuroprotective in a rat model of Parkinson’s disease (2008).*
  - *Cationic liposomes for intranasal delivery of genes to the brain (2008).*
  - *Intranasal delivery of GDNF to the Brain Using Cationic Liposomes (2007).*
  - *Brain delivery of proteins by the intranasal route of administration using cationic liposomes (2006).*
- Reed 2009 Conference poster presentation: *Intranasal GDNF is neuroprotective in a rat model of Parkinson’s disease.*
- AACP 2009 abstract submission and poster presentations:
  - *Intranasal GDNF is neuroprotective in a rat model of Parkinson’s disease.*
  - *Intranasal GDNF exerts a neurotrophic effect on midbrain dopamine neurons in the*

*rat.*

- Northeastern University Graduate Expo abstract and poster presentation:
  - *Intranasal Delivery of GDNF to the Brain Using Cationic Liposomes (2007).*
  - *Intranasal Delivery of GDNF for the Treatment of Parkinson's disease (2006).*
- ISPE 2007 abstract and poster presentation:
  - *Brain delivery of proteins by the intranasal route of administration using cationic liposomes.*
- Visiting Lecturer in Pharmacology (2004), Northeastern University.
- Updated the Brigham and Women's Hospital's "Intravenous Drug Administration Guidelines."
- Other presentations:
  - Thesis Defense Presentation on April 3, 2008: "*Intranasal Delivery of GDNF for the treatment of Parkinson's Disease.*"
  - IGERT Nanomedicine Discussion Lecture Series 2008: "*Intranasal Delivery of GDNF for the treatment of Parkinson's Disease.*"
  - Graduate Materials Links Symposium 2007: "*Brain Delivery of Proteins by the Intranasal Route of Administration Using Cationic Liposomes.*"
  - "*Intranasal Delivery of Proteins Using Cationic Liposomes for the Treatment of Parkinson's Disease and the Use of Bioquant® Image Analysis Software.*"
  - "*Intranasal Drug Delivery Using Nanoparticle Formulations.*"
  - "*RET is Dispensable for Maintenance of Midbrain Dopaminergic Neurons in Adult Mice.*"
  - "*Cancer Therapy and Nanotechnology.*"
  - "*Delivery of Insulin-Like Growth Factor-I to the Rat Brain and Spinal cord along Olfactory and Trigeminal Pathways Following Intranasal Administration.*"
  - "*Benzo(a)pyrene DNA Adducts as Biomarkers.*"
  - "*Role for Microglia in Rotenone-Induced Degeneration of Dopaminergic Neurons.*"
  - "*The Role of Prostacyclin in the Cardiovascular Response to Thromboxane A2.*"
  - "*Reduction of Ischemia and Reperfusion-Induced Myocardial Damage by Cytochrome P450 Inhibitors.*"
  - "*Morphine Reward in Dopamine-deficient Mice.*"
  - "*Cox-2-derived Prostacyclin Confers Atheroprotection on Female Mice.*"
  - "*Angiotensin II Receptors.*"
  - "*Asthma Management.*" *To the Brigham and Women's Inpatient Pharmacy staff.*
  - "*Reversing Excessive Anticoagulation.*" *To the Brigham and Women's Inpatient Pharmacy staff.*
- Conducted an Undergraduate Research Project titled: "*Nitric Oxide Impairs Cardiovascular Responsiveness during anaphylactic shock in the rat*" with Dr. Laurie Kelly at Massachusetts College of Pharmacy and Health Sciences.

## **MCPHS COMMITTEE ASSIGNMENTS/LEADERSHIP ROLES**

- ❖ Dean Advisory Counsel (Spring 2015-Present)
- ❖ Pharmaceutical Sciences Faculty Search Committee (Fall 2015-Present)



- ❖ Phi Kappa Phi MCPHS University Chapter President (2014-Present)
- ❖ Phi Kappa Phi MCPHS University Chapter Charter Founding Member (January, 2014)
- ❖ School of Pharmacy-Boston Curriculum Committee (2013-Present; Chair)
- ❖ Lambda Kappa Sigma (LKS) faculty advisor (2011-Present)
- ❖ School of Pharmacy-Boston Curriculum Committee (2011-2013; Secretary)
- ❖ Physician Assistant Program Faculty Search Committee (2010-2012)
- ❖ Pharmacy Practice Faculty Search Committee (Spring 2012-2015)
- ❖ Institutional Animal Care and Use Committee (IACUC; 2010-2011)
- ❖ Pharmacy Transfer Admissions Committee (2008-2011)
- ❖ Pharmaceutical Sciences Faculty Search Committee (2009-2012)

#### **PROFESSIONAL AFFILIATIONS:**

- ❖ Phi Kappa Phi Honor Society
- ❖ Sigma Xi The Scientific Research Society
- ❖ Rho Chi National Pharmacy Honor Society, Psi Chapter
- ❖ Massachusetts Society of Health-System Pharmacists
- ❖ Society for Neuroscience
- ❖ American Society for Pharmacology and Experimental Therapeutics (ASPET)
- ❖ American Association of Colleges of Pharmacy (AACP)
- ❖ Lambda Kappa Sigma

#### **OTHER AFFILIATIONS:**

- ❖ Italian American Student Organization faculty co-advisor (2010-2015)
- ❖ Entered into a Collaborative Drug Therapy Agreement at the Brigham and Women's Hospital Anticoagulation Service with Dr. Jean Connors and became licensed to prescribe in MA (Commonwealth of MA Public Health Division of Food and Drugs: MM0865204P).

#### **LANGUAGES:**

- English
- Spanish
- Italian

#### **AWARDS AND RECOGNITIONS:**

- MCPHS School of Pharmacy Pharmaceutical Sciences Teacher of the Year (2015-2016)
- Faculty Research Scholarship Award of Discovery (2015): MCPHS University.
- Recipient of Lambda Kappa Sigma Alumni Ruth Davis Service Award (2014).
- MCPHS School of Pharmacy Pharmaceutical Sciences Teacher of the Year (2012-2013)
- Faculty Research Scholarship Award of Discovery (2011): Massachusetts College of Pharmacy and Health Sciences.
- Copernicus Therapeutics Inc. donated a GDNF plasmid under a material transfer agreement in 2011.
- John L. Neumeyer Research Achievement Award (2008): Northeastern University.
- Phi Kappa Phi Honor Society (2008).
- Collaborator on a 2012 Michael J. Fox Foundation for Parkinson's Research Grant to conduct research at the New England Primate Center in Southborough.

- Michael J. Fox Foundation for Parkinson's Research Grant 2007 for a feasibility study.
- Michael J. Fox Foundation for Parkinson's Research Grant 2008 for \$187,000.
- Amgen donated ~\$200,000 of protein (GDNF) reagent for my research.
- Awarded an NCI-NSF IGERT Fellowship in Nanomedicine (2005-2007).
- American Foundation for Pharmaceutical Education (AFPE) Fellowship (2005-2006).
- Recipient of the Graduate and Professional Student Association Travel Award, Northeastern University (2006 and 2007).
- Rho Chi National Pharmacy Honor Society membership, Psi Chapter (1997).

**PERSONAL INTERESTS:**

- Textile Arts
- Cooking