CURRICULUM VITAE

2004-present Associate Professor
Dept. of Biomedical Sciences
Marquette University

2007-2009 Associate Chair
Dept. of Biomedical Sciences
Marquette University

TEACHING:

BISC 145, 4145 Human Physiology (Undergraduate)
BISC 160, 4160 Molecular Pathology
BISC 423, Human Physiology (Dental School)
BISC 425-426, 7517, 7518 Biomedical System 3 & 4
PHTH 560 Integrated Medical Neuroscience
BIOL 215, Neuroscience I
BIOL 250, Techniques in Neuroscience Research
BIOL 251, Advanced Survey of Neuroscience 1
BIOL 252, Advanced Survey of Neuroscience 2
BIOL 350, Glutamate as a Neurotransmitter
BIOL 350, The Neurobiology of Stress

Course Director:
BISC 423: 1998-2004
BISC 425: 2005-2008
BISC 145: 2008-2009
BIOL 251: 2006-2009
BIOL 252: 2006-2009
BIOL 350: 2008, 2009

BISC 195 - Independent Study
I have served as mentor for approximately 15 undergraduate students taking Independent study for credit.

Thesis Director for the following Masters degree students:

Mahshid Asrari, DDS, Endodontics Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2003.

Mark Hanson, DDS, Orthodontics Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2004.

Alexis David, DDS, Orthodontics Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2004.

Doug Barden, DDS, Orthodontic Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2005.

Smita Cabrera, DDS, Orthodontic Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2006.

David Mershon, DDS, Orthodontic Resident, Marquette University School of Dentistry, Master of Science in Dentistry degree awarded in May 2007.

Thesis committee for the following PhD students:

2002-2003: Geraldine Liot PhD, Neuroscience, University of Caen, France
2007-2011: Aric Madayag. Marquette University
2009-present: John Resch, Marquette University
2011-present: Yulin
2011-present: Ling-Hi Kong
2012-present: Man Wu

Thesis director for the following PhD students:

2007-2011: Travis Rush, Marquette University
2008-2012: XiaoQian Liu, Marquette University
2010-present: Rebecca Albano, Marquette University

COMMITTEES:

University: Institutional Animal Care and Use Committee (1998-present),
Chair (2008-present)
Committee on Research (2003-present)

Committee (1999-present), Chair (2005-2007)
Department of Biological Sciences Graduate Recruitment Committee, Neuroscience Track (2006-2007)
Dental School Curriculum Committee (2000-2009)
Graduate Program Steering Committee, Chair (2008-present)
Advising Committee (2008-present)
Promotion and Tenure Committee (2008-present)
Joint Biomedical/Biological Sciences exploratory committee resonsable for constructing the specialization in neuroscience PHD program (2005-2006).
Joint Biomedical Sciences/Dental School committee responsible for developing a new dental curriculum (2002-2003).

SERVICE (other):

Advisor for approximately 40 undergraduate students.

Advisor for all first year neuroscience graduate students (2007-2009).

Teaching mentor for new faculty in Biomedical Sciences: (2007-present)

Organize BISC 195 (Indepent Study) presentations each semester (2003-present).

Judged poster competitions for Dental School Research Day (2000-2007), College of Health Sciences Summer Research Program (2005-2007), and Forward Thinking Poster Competition (2006).

Reviewer for the Midwest Association of Graduate Schools

Organized a series of career seminar speakers for Biomedical Sciences majors. Speakers included an optometrist, podiatrist, physical therapist, pharmaceutical company scientist, and a clinical laboratory technician (1998).

REVIEWER:

Grants:

Annals of Neurology (2001)
Antioxidants & Redox Signalling (2011, 2012)
Biochimie (2010, 2001)
Brain Research (1999, 2002, 2003, 2004, 2006, 2008, 2009, 2014)
Brain Research Bulletin (2012)
Cell Biology and Toxicology (2009)
Cellular and Molecular Life Sciences (2013)
Chemical Resarch in Toxicology (2011)
Clinical Cancer Research (2011)
Environmental Toxicology and Pharmacology (2009; 2012)
Experimental Neurology (2000; 2008)
FASEB Journal (2002)
Food and Chemical Toxicology (2012)
Free Radical Biology and Medicine (2004)
IEE Transactions on Plasma Sciences (2004)
International Journal of Environmental Research and Public Health (2010)
Journal of Applied Oral Science (2010)
Journal of Contemporary Dental Practice (2006)
Journal of Neurochemistry (1999-present, multiple manuscripts each year)
Journal of Neuroscience (2003)
Journal of Neuroscience Methods (2001)
Journal of Neuroscience Research (2002, 2006, 2010)
Journal of Orthodontics (2006, 2008)
Journal of Paediatric Dentistry (2012)
Journal of Physiology and Pharmacology (2012)
Life Sciences (2006, 2008)
Molecular Brain Research (2005)
Neurobiology of Disease (2008, 2009, 2010)
Neurochemistry International (2004)
Neuroscience (1998, 2002, 2014)
Neurotoxicology (2008)
Neurotoxicology and Teratology (2011)
Neurotoxicity Research (2010)
The Angle Orthodontist (2004)
PLo57 ElCne (20,12011)
57 Ecientific Reports (2012)
Toxicology Letters (2004)

Doug Lobner (PI)
Regular Research Grant 7/1/99-6/30/00
Marquette University $2,500
Growth factor effects on cell death in hippocampal neurons.

Doug Lobner (PI)
Seed Grant 7/1/99-6/30/00
College of Health Sciences $1,500
Support for undergraduate research

Doug Lobner (PI)
Seed Grant 11/1/99-10/31/00
American Paraplegia Society $10,800
Effects of growth factors on death of spinal cord neurons.

Doug Lobner (PI)
Regular Research Grant 7/1/00-6/30/00
Marquette University $2,500
Effects of bFGF on neuronal cell death.

Doug Lobner (Co-PI)
Collaborative Research Grant 7/1/01-6/30/02
Integrative Neuroscience Research Center $1,200
In vivo and in vitro effects of GABA ligands.
Co-PI with Linda Vaughn

Doug Lobner (PI)
RO1 8/01/00-6/30/06
NIH/NIA $1,020,000
Mechanisms of injury potentiation by growth factors

William Cullinan (PI), Doug Lobner (Co-PI)
S10RR017955 (Equipment Grant) 3/1//03
NIH $250,474
Laser scanning confocal imaging system.

Doug Lobner (PI)
R15 8/1/08-7/31/11
NIH/NIDCR $223,500
Effects of growth factors on dental pulp cells.

Steven R. Pollack (PI),
Promentis Pharmaceuticals, Inc. 9/24/08-6/30/10

R43 (SBIR) $500,000
NIH/NIMH
Development of Compounds Targeting xc- for the Treatment of Schizophrenia
Doug Lobner (Consultant), Annual Direct Costs: $28,000

Multiple PI grant (David Baker, James Cook, Rita Fuchs Lokensfgard, Lalitha Iyer, Doug Lobner, John Mantsch)
RO1 8/1/09-7/31/11
NIH/NIDA $1,800,000
Targeting System xc- for the Treatment of Addiction
Doug Lobner Total Direct Costs: $145,158

Chad Beyer, David Baker (PIs)
Promentis Pharmaceuticals, Inc. 9/14/12-6/30/15
SBIR (Phase 2) $1,800,000
NIH/NIMH
Targeting System xc- for the Treatment of Schizophrenia
Doug Lobner (Consultant

Chad Beyer (PI)
Promentis Pharmaceuticals, Inc. 9/1/12-8/31/13
Michael J. Fox Foundation $300,000
Targeting System xc-
Doug Lobner (Consultant)

INVITED LECTURES:

50. Albano R*, Liu XQ*, Lobner D. Regulation of system x_c- in the SOD1-G93A mouse model of ALS. Exper Neurol. 2013;250:69-73.

49. Bridges R, Lutgen V, Lobner D, Baker DA. Thinking outside the cleft to understand synaptic activity: contribution of the cystine-glutamate antiporter (System xc-) to normal and pathological glutamatergic signaling. Pharmacol Rev. 2012;64:780-802.

48. Rush T, Liu XQ, Nowakowski AB, Petering DH, Lobner D. Glutathione-mediated neuroprotection against methylmercury neurotoxicity in cortical culture is dependent on MRP1. Neurotoxicology. 2012;33:476-481.

47. Rush T, Liu XQ, Lobner D. Synergistic toxicity of the environmental neurotoxins methylmercury and -N-methylamino-L-alanine. *Neuroreport.* 2012;23:216-219.

46. Liu X, Resch J, Rush T, Lobner D. Functional upregulation of system xc- by fibroblast growth factor-2. *Neuropharmacology.* 2012;62:901-906.

45. Pauly K, Fritz K, Furey A, Lobner D. Insulin-like growth factor 1 and transforming growth factor-b stimulate cystine/glutamate exchange activitiy in dental pulp cells. *J Endo.* 2011;37:943-947.

44. Furey A, Hjelmhaug J, Lobner D. Flow Line, Durafill VS, and Dycal toxicity to dental pulp cells: effects of growth factors. *J Endo*. 2010;36:1149-1153.

43. Slotkin TA, Lobner D, Seidler FJ. Transcriptional profiles of glutamate transporters reveal differences between organophosphates but similarities with unrelated

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neurotoxicity in cortical culture. *Neurotox.* 2009; 30:47-51.

36. Liu X, Rush T, Zapata J, Lobner D. beta-N-methylamino-L-alanine induces oxidative stress and glutamate release through action on system Xc(-). *Exp Neurol.* 2009;217:429-433.

35. Leveille F, El Gaamouch F, Gouix E, Lecocq M, Lobner D, Nicole O, Buisson A. Neuronal viability is contolled by a functional relation between synaptic and extrasynaptic NMDA receptors. *FASEB ren*

11. Hewett SJ, Muir JK, Lobner D, Symons A, Choi DW. Potentiation of oxygen-glucose deprivation-induced neuronal death after induction of iNOS. *Stroke.* 1996,27:1586-1591.

10. Lobner D, Choi DW. Preincubation with protein synthesis inhibitors protects cortical neurons against oxygen-glucose deprivation-induced death. *Neuroscience*. 1996,72:335-341.

9. Gwag BJ, Koh JY, Chen MM, Dugan LL, Behrens MM, Lobner D, Choi DW. BDNF or IGF-I potentiates free radical-mediated injury in cortical cell cultures. *Neuroreport*. 1995;7:93-96.

8. Gwag BJ, Lobner D, Koh JY, Wie MB, Choi DW. Blockade of glutamate receptors unmasks neuronal apoptosis after oxygen-glucose deprivation in vitro. *Neuroscience*. 1995;68:615-619.

7. Rokkas CK, Cronin CS, Nitta T, Helfrich LR, Lobner DC, Choi DW, Kouchouckos NT. Profound systemic hypothermia inhibits the release of neurotransmitter amino acids in spinal cord ischemia. *J Thorac Cardiovasc Surg*. 1995;110:27-35.

6. Koh J, Gwag BJ, Lobner D, Choi DW. Potentiated necrosis of cultured cortical neurons by neurotrophins. *Science*. 1995;268:573-575.

5. Lobner D, Choi DW. Dipyridamole increases oxygen-glucose deprivation induced injury in cortical cell culture. *Stroke*. 1994;25:2085-2090.

4. Rokkas CK, Helfrich LR, Lobner D, Choi DW, Wareing TH, Kouchoukos NT. Dextrorphan inhibits the release of excitatory amino acids in spinal cord ischemia. *Ann Thorac Surg* 1994;58:312-320.

3. Lobner D, Lipton P. Intracellular calcium levels and calcium fluxes in the CA1 region of the rat hippocampal slice during in vitro ischemia: relationship to electrophysiological damage. *J Neurosci*. 1993;13:4861-4871.

2. Lobner D, Lipton P. Sigma ligands and non-competitive NMDA antagonists inhibit glutamate release during cerebral ischemia. *Neurosci Lett*. 1990;117:169-174.

1. Lipton P, Lobner D. Mechanisms of intracellular calcium accumulation in the CA1 region of rat hippocampus. *Stroke*. 1990;21(III):III-60-III-64.

ABSTRACTS:

47. Liu X, Rush T, Hjelmhaug J, Lobner D. Neurotoxic mechanisms of organophosphate pesticides. *Soc Neurosci Abs*. 2008;755.9.

46. Rush TJ, Liu X, Hjelmhaug J, Lobner D. Mercury produces compound-specific alterations to glutathione in cultured neurons and astrocytes. *Soc Neurosci Abs*. 2008;755.8.

45. Hjelmhaug JA, Rush T, Lobner D. Effects of chelators on metal toxicity in cortical cultures. *Soc Neurosci Abs*. 2008;755.7.

44. Madayag A,Rush T, Lobner D, Abdulhameed O, Baker D. Modulation of cystine-glutamate exchange by d1-like dopamine receptors: system xc- as a potential site for dopamine-glutamate interactions. *Soc Neurosci Abs*. 2008;663.26.

43. Kau KS, Abdulhameed O, Lobner DC, Baker DA. Repeated N-Acetylcysteine administration prevents cocaine induced neurochemical and behavioral plasticity. *Soc Neurosci Abs*. 2007;815.5.

42. Madayag A, Lobner DC, Baker DA. Dopamine and extrasynaptic glutamate

33. Lobner D, Hjelmhaug J, Salous A. Concentration dependent effects of estrogen and progestins on cell death in cortical cultures. International Conference on Cerebral Ischemia and Blood Flow. 2004.

32. Hjelmhaug J, Lobner D. Effects of hepatocyte growth factor on apoptotic and necrotic death in cortical culture. *Soc Neurosci Abs*. 2003;738.1.

31. Hjelmhaug J, Golner S, Lobner D. Protection against free radical induced neuronal death by cobalt. *Soc Neurosci Abs.* 2002;201.6.

30. Lobner D, Asrari M. Neurotoxicity of dental amalgam is mediated by zinc. *Soc Neurosci Abs.* 2002;205.6.

29. Asrari M, Bahcall J, Lobner D. Neurotoxic evaluation of root-end filling materials in cortical cell cultures. *J Endodontics.* 2002;28:PR18.

28. Kelly JA, Jaunberzins A, Bahcall JK, Lobner D. The effect of three root-end filling materials on mice osteoblast cells. *J Endodontics.* 2002;28:PR17.

19. Grabb MC, Lobner D, Choi DW. Effects of ischemic tolerance on extracellular glutamate accumulation during oxygen-glucose deprivation in cortical cell culture. *Soc Neurosci Abs.* 1997;23:2182.

18. Yeh CH, Lobner D, Choi DW. Attenuation of neuronal apoptosis by desipramine and chlorpromazine. *Soc Neurosci Abs.* 1997;23:1715.

17. Behrens MM, Strasser U, Dugan LL, Lobner D, Choi DW. Protein kinase C inhibition blocks BDNF activation of trkB receptors. *Soc Neurosci Abs.* 1997;23:58.

16. Lobner D, Choi DW. Saturation of A1 receptor-mediated neuroprotection by endogenous adenosine in cortical cultures exposed to oxygen-glucose deprivation. *Soc Neurosci Abs.* 1996;22:1433.

15. Dugan LL, Turetsky DM, Du C, Lin TT, Lobner D, Almli R, Wheeler M, Choi DW. Carboxy-buckminsterfullerenes: novel antioxidants with neuroprotective efficacy in vitro and in a mouse model of ALS. *Soc Neurosci Abs.* 1996;22:2142.

14. Ying HS, Gwag BJ, Behrens MM, Koh J, Lobner D, Choi DW. Neurotrophins induce NMDA receptor expression in cultured rat neocortical neurons. *Soc Neurosci Abs.* 1995;21:1031.

13. Lobner D, Gwag BJ, Koh J, Ying HS, Behrens MM, Choi DW. BDNF potentiation of oxygen-glucose deprivation-induced neuronal death: involvement of gene expression and nitric oxide synthase. *Soc Neurosci Abs*. 1995;21:1032.

12. Muir JK, Lobner D, Choi DW. Muscimol attenuates excitotoxicity, but exacerbates oxygen-glucose deprivation neuronal injury in cortical cell cultures. *Soc Neurosci Abs*. 1994;20:181.

11. Lobner D, Gwag BJ, Koh J, Choi DW. Neurotrophins potentiate oxygen-glucose deprivation injury but attenuate staurosporine induced injury in murine cortical cell culture. *Soc Neurosci Abs*. 1994;20:442.

10. Gwag BJ, Lobner D, Koh J, Wie MB, Choi DW. Blockade of glutamate receptors during oxygen or glucose deprivation unmasks apoptosis in cultured cortical neurons. *Soc Neurosci Abs*. 1994;20:248.

9. Choi DW, Koh J, Wie MB, Gwag BJ, Lobner D, Canzoniero LMT, Sensi SL, Oh YJ, -2 transfection protects NM9D cells against beta-amyloid toxicity and glucose deprivation but not several other insults. *Soc Neurosci Abs*. 1994;20:604.

8. Lobner D, Choi DW. Source of extracellular adenosine during oxygen/glucose deprivation in cultured cortical neurons. *Soc Neurosci Abs*. 1993;19:1661.