

CURRICULUM VITAE

General/Personal Information

Name: Manisha N. Patel

Current position Associate Professor
Department of Pharmaceutical Sciences, School of Pharmacy
University of Colorado Health Sciences Center
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Educational History

1987 Bachelor of Pharmacy MS University of Baroda, Pharmacy
1992 Doctor of Philosophy Purdue University, Pharmacology and Toxicology
1996 Post-doctoral fellowship Duke University, Neuroscience

Professional Experience

1987 - 1992 Graduate Teaching Assistant, Department of Pharmacology and Toxicology, Purdue University, Lafayette, Indiana (Mentor: Dr. Gary E. Isom, Professor of Toxicology).
1992 - 1996 Post-Doctoral Fellow, Division of Neurology, Department of Medicine, Duke University, Durham North Carolina (Mentor: Dr. James O. McNamara, Carl R. Deanne Professor of Neuroscience).

Academic Appointments

1996 - 1997 Assistant Research Professor, Division of Neurology, Department of Medicine, Duke University, Durham, North Carolina.
1997 - 2002 Assistant Professor, Division of Environmental Health Sciences, Department of Medicine, National Jewish Medical and Research Center (NJC), Denver, Colorado.
1998-2005 Assistant Professor, Department of Medicine, University of Colorado Health Sciences Center (UCHSC), Denver, Colorado.
2002-2005 Assistant Professor, Department of Pharmaceutical Sciences, School of Pharmacy, UCHSC, Denver, Colorado.
2005- Associate Professor (tenured), Department of Pharmaceutical Sciences, School of Pharmacy, UCHSC, Denver, Colorado
2003- Faculty Member, Program in Neuroscience, University of Colorado Health Sciences Center, Denver, Colorado.

Teaching Activity

Undergraduate and graduate courses

Undergraduate Courses

1987 - 1992 Pharmacology & Toxicology Laboratory for 4th year pharmacy students,
Department of Pharmacology, Purdue University.

Professional Program Courses (UCHSC)

Spring 2003- PHRD4770, Integrated Organ Systems-8/CNS, 12 contact hours. (Pharmacology
of sedatives/hypnotics, antipsychotics, antiparkinsonian, antidepressants).
Fall 2003- Instructor, PHRD4200, Instructional methods II, 8 contact hours.
Spring 2004 Course coordinator, PHRD4770, Integrated Organ Systems-8/CNS, 4 credit
hours.

Graduate Courses

Spring 2001 Instructor, Problem Based Learning Course in Toxicology, NJC.
Fall 2002- Instructor, TXL7322, 2 contact hours, Toxicology Graduate Program, UCHSC.

Continuing Education

Speaking Engagements in Workshops and Special Interest Groups

12/2002 Organizer and speaker in Basic and Clinical Science Workshop, American
Epilepsy Society Annual Meeting, 2002. Title: Mitochondria, free radicals and
epilepsy.
11/2003 Faculty participant, Society for Free Radical Biology and Medicine (SFRBM),
Grant writing workshop for junior investigators.
11/2004 Co-chair and speaker, 2004 Professional Development Workshop, Society for
Free Radical Biology and Medicine, St. Thomas, USVI. Workshop title:
Negotiation for Success.
2005-present Co-Chair and organizer, Junior Investigator Special Interest Group, American
Epilepsy Society (AES)

Advising Activity

Postdoctoral Fellows/Research Technicians (NJC and UCHSC)

1998 -2005 Postdoctoral Fellow, (Li-Ping Liang, M.D.).
1999 - 2002 Postdoctoral Fellow, (Qing-You Li, M.D.).
1999 Summer Undergraduate Student, Duke University (Suzanne Clayton).
1999 – 2000 Research technician I (Amanda Selwyn).
2005-2006 Postdoctoral Fellow (Pablo Castello, Ph.D.)
2007- Postdoctoral Fellow (Stuart Jarrett, Ph.D.)
2007- Postdoctoral Fellow (Simon Waldbaum, Ph.D.)
2007- Research Associate (Tamara Golden, Ph.D.)

Graduate/Trainee Rotation Students

2003 Spring Toxicology graduate student rotation (Heidi O'Neill)
2003 Spring Toxicology graduate student rotation (Nicholas Sophos)
2004&05 Summer Undergraduate student University of Denver (Jason Fritz)
2004 Fall Toxicology graduate student rotation (Derek Dreschel)
2004 Fall Neuroscience graduate student rotation (Monique Beaudoin)

2005 Fall	Toxicology graduate student rotation (Jason Fritz)
2005 Fall	Neuroscience graduate student rotation (Dianna Bartel)
2005 Winter	Neuroscience graduate student (Julie Schutzman)
2005 Spring	Neuroscience graduate student (David Cantu)
2006 Summer	MSTP student (Sruthi Pandipati)
2007 Spring	Toxicology graduate student (Kristen Ryan)
2008 Winter	STEPS Program student (Jason Whitford)

Student/Trainee Committee Membership

2005-2006	KO8 Committee (Andrew White, M.D.)
2005-2007	Comprehensive exam and thesis committee chair (UCHSC Neuroscience graduate student, Angela Zimmerman)
2005	Graduate Advisory Committee (Renee Good, Toxicology)
2006-	Graduate Advisory Committee (Monique Beaudoin, Neuroscience)
2006-	Graduate Advisory Committee (Rebecca Vest, Pharmacology)
2007-	Graduate Advisory Committee (Dianna Bartel, Neuroscience)
2007-	Graduate Advisory Committee (Yan Li, Immunology)
2008-	Graduate Advisory Committee (Thomas Precht, Pharmacology)

Thesis advisor

2005-	Derek Drechsel (Ph.D. student, Toxicology)
2006-	David Cantu (Ph.D. student, Neuroscience)
2006	Julie Milder (Ph.D. student, Neuroscience)
2007	Kristen Ryan (Ph.D. student, Toxicology)

Research advisor

2007-	Andrew White, M.D. Ph.D., Asst. Professor of Ped. Neurol. (K08 mentor)
2007-	Lauren Frey, M.D., Asst. Professor, Neurology.

Administrative Activity and University Service

National Level

2001-2004	Member, Investigator Workshop Committee, AES
2003-	Member, Research Council, Epilepsy Foundation of America
2006-2007	Member, Executive Committee, NINDS Conference "2007 Curing Epilepsy"
2006-2009	Member, Basic and Clinical Investigators' workshop committee, AES
2006-	Member, Mentoring Taskforce, AES
2007	Chair, Funding Success Taskforce, AES
2007-2010	Member, Research & Training Committee, AES
2007-2010	Chair, Funding Success Committee, AES

Institutional Level

UCHSC (School of Pharmacy)

2003	Member, Scholastic advancement and appeals committee
2004	Co-organizer, Department of Pharmaceutical Sciences, 10 th Annual Retreat
2005-2006	Chair, Special Review Committee for Tenure-Related Issues
2005-2009	Elected Member, Department of Pharmaceutical Sciences, Appointments, Promotion and Tenure Committee
2006-	Research Funds/Awards Allocation Committee

2006- Member, Curriculum Committee
2007 Member, search committee, Associate Dean for Education, SOP

UCHSC (Program in Neuroscience)

2003-2004 Member, Admissions committee
2004-2005 Co-chair, Admissions committee
2004-2006 Member, Retreat committee
2004-2005 Member, Steering committee
2006- Member, Graduate Training Committee

UCHSC (University-wide committees)

2004-2007 Member, UCHSC Faculty Womens' Committee

Honors and Awards

1987 Bachelor of Pharmacy with Distinction
1990-1992 David Ross Fellowship, Purdue University
1992 Jenkins/Knevel Award for Excellence in Research, Purdue University
1988 -1991 Rho Chi Honor Society, Purdue University
1992-1995 NINDS Stroke Fellowship, Duke University
1996&1997 Junior Investigator Grant Award, Epilepsy Foundation of America
1998&2000 Alzheimer's Investigator Development Award, Maria Jones Foundation
1999- 2001 Parents Against Childhood Epilepsy (PACE) Grants
2001-2002 Recipient, International Research Grant Award, Parkinson's Disease Foundation

Professional Activity and Public Service

Membership in Professional Organizations

1989 - Society for Neuroscience
1998 - Society for Free Radical Biology and Medicine
1999 - American Epilepsy Society
2000 -2005 Women in Neuroscience
2000 – Association of Women in Science (AWIS)
2004- Society for Toxicology

Grant Review Panels

2000-2003 Alzheimer's Association (ad hoc reviewer)
2002-2008 Epilepsy Foundation's Research Council of the Professional Advisory Board
2003- Partnership for Pediatric Epilepsy Grants Review Committee
2003 NINDS, (NSD-C) study section (ad-hoc reviewer)
2004 NINDS, ZRG-1, Special Emphasis Panel
2004- Citizens United for Research in Epilepsy (CURE; scientific review committee)
2005 Oct. NIH, CSR CNNT (ad hoc reviewer)
2006-2010 NIH CSR, CNNT permanent member

Journal Referee (ad hoc)

(American Journal of Physiology; Brain Research; Brain Research Bulletin; Chemical Biological Interactions; Clinica Chimica Acta; Epilepsia; Epilepsy Research; Experimental Aging Research; Experimental Neurology; Free Radicals in Biology and Medicine; Journal of Biological Psychiatry; Journal of Neurochemistry; Journal of Neuroscience; Journal of

Biological Chemistry; Journal of Pediatric Gastroenterology and Nutrition; Journal of Psychiatry and Neuroscience; Molecular Pharmacology; Molecular Psychiatry; Neuropharmacology; Neuroscience; Pharmacological Research; Proceeding of the National Academy of Sciences (USA); Toxicology and Applied Pharmacology)

Editorial Board Membership

Free Radicals in Biology and Medicine

Speaking Engagements

Local

- 10/1995 Department of Pharmacology (Duke University) Annual Retreat, RTP. Seminar Title: Requirement for Superoxide in Excitotoxic Cell Death.
- 4/2003 Program in Neuroscience (UCHSC), Membership seminar. Title: Superoxide radicals and neurodegeneration.
- 5/2004 Web-Waring Antioxidant Institute (invited speaker), UCHSC, Denver, Colorado. Title: Oxidative stress, mitochondrial dysfunction and epilepsy.

State

- 10/2000 Department of Immunology Annual Retreat (National Jewish and UCHSC) Estes Park, Colorado, Seminar title: Superoxide radical and age-related neurodegeneration.
- 12/2001 Department of Pharmaceutical Sciences, Toxicology seminar series (UCHSC), Denver, Colorado. Title: Superoxide radicals in excitotoxic neurodegeneration.
- 3/2002 Department of Pharmaceutical Sciences, Department Seminar Series (UCHSC), Denver, Colorado. Title: Superoxide radicals in excitotoxic neurodegeneration.
- 6/2003 Department of Pharmaceutical Sciences Annual Retreat (UCHSC), Winter Park Colorado. Title: Mitochondrial aconitase inactivation and free iron in experimental Parkinson's disease.
- 9/2003 Program in Neuroscience Annual Retreat (UCHSC), Keystone Colorado. Title: Mitochondrial aconitase inactivation and free iron in Parkinson's disease.
- 9/2004 Program in Neuroscience Annual Retreat (UCHSC), Keystone Colorado. Title: Oxidative stress in neurodegeneration.
- 3/2007 Department of Neurobiology seminar series, Colorado State University, Fort Collins, CO.

National

- 3/2001 Annual Meeting of the Mitochondrial Society, San Diego, California. Title: Sod2 deficient mice show increased susceptibility to kainic acid excitotoxicity in vivo.
- 6/2001 Department of Pharmacology Seminar series, Ohio State University, Columbus Ohio. Seminar Title: Superoxide Radicals in Excitotoxicity.
- 11/2001 Department of Pharmacology Seminar series, University of Pittsburgh, Pittsburgh, Pennsylvania. Title: Superoxide radicals in Excitotoxic Neurodegeneration.
- 12/2002 Speaker and chair: "Mitochondria and Free Radicals", Basic Science Workshop, American Epilepsy Society Annual Meeting, Seattle, Washington.
- 03/2003 Discussion Leader: "Antioxidants as Therapeutics", Gordon Conference on Oxidative Stress and Disease, Ventura, California.

- 11/2003 Invited plenary speaker for session “Mitochondrial ROS in Cell Signaling and Disease”, 10th Annual Oxygen Society Meeting, Seattle, Washington. Title: Mitochondrial superoxide toxicity in neurodegeneration.
- 02/2004 Invited discussion leader, Gordon Conference on Oxygen Radicals, Ventura, California. Session: Environmental risk factors and human disease.
- 02/2004 Invited speaker, Gordon Conference on Oxygen Radicals, Ventura, California. Title: Mitochondria and free radicals in epilepsy.
- 05/2004 Invited participant, NINDS workshop on pediatric epilepsy models, Washington DC. Title: Will drug screening ever be practical in developmental models?
- 5/2004 Department of Pediatrics Seminar Series, Columbus Children’s Hospital and Ohio State University, Columbus, Ohio. Title: Mitochondrial dysfunction and neuronal disorders.
- 2/2005 Invited speaker, Medical College of Wisconsin, Free Radical Center, Milwaukee, Wisconsin. Title: Mitochondrial superoxide and neuronal disorders.
- 4/2005 Invited speaker, Annual 2005 Experimental Biology Annual Meeting, Division of Toxicology Symposium. Title: Role of mitochondria and toxic oxidative stress.
- 3/2006 Invited speaker, 2006 Annual Society of Toxicology Meeting, Symposium on Mitochondria and Toxic Oxidative Stress.
- 9/2006 University of California, Irvine, Department of Neurobiology and Anatomy seminar series. Title: Mitochondrial Dysfunction and Oxidative Stress in Epilepsy.
- 11/2006 Invited Plenary Session Speaker, Society of Free Radical Biology and Medicine. Session: Organometallic therapeutic agents. Title: Metalloporphyrin catalytic antioxidants as neuroprotective agents in experimental Parkinson’s disease.
- 10/10/07 Invited speaker, University of Utah, Department of Pharmacology Seminar Series. Title: Emerging role of mitochondrial dysfunction in epilepsy.
- 11/2007 Invited speaker, GTCbio 3rd Annual Therapeutic Strategies for Neurodegenerative Diseases, San Francisco, CA. Title: Metalloporphyrin catalytic antioxidants as therapeutic agents for neurodegenerative diseases.
- 12/2007 Session Chair and speaker, Investigators’ Workshop, American Epilepsy Society, Philadelphia, PA. Title: Mitochondrial (dys)function in epilepsy.
- 12/2007 Invited speaker, Investigator’s Workshop, American Epilepsy Society, Philadelphia, PA. Title: Metabolic control of seizures.
- 5/14/2008 Invited speaker, Uniformed Health Sciences University, Department of Pharmacology Seminar Series. Title: TBA

Research Grants

Current Grant Support:

- R01 NS39587 Title: Superoxide Radicals in Seizure-Induced Neuronal Death.
Agency: NIH (NINDS)
Principal Investigator: Manisha Patel.
Period: April 1, 2000-March 31, 2009.
- RO1NS39587S1 Title: Supplement to above project
Agency: NINDS
Principal investigator: Manisha Patel (David Cantu, mentee)
- RO1NS045748 Title: Mitochondrial aconitase and Parkinson’s disease.
Agency: NIH (NINDS)
Principal Investigator: Manisha Patel

R21 NS053548 Period: 12/1/2003-11/30/2007 (no-cost extension: 11/30/08)
Title: Two-step therapeutic screen for mitochondrial epilepsies
Agency: NIH (NINDS)
Principal Investigator: Manisha Patel
Period: 6/1/06-5/30/08

Fellowship Mentor (Patel) -:

RO1NS39587S1 Diversity supplement (David Cantu, Neuroscience trainee)
EF Postdoctoral Redox regulation by the ketogenic diet (Stuart Jarrett, Ph.D.)
AFPE Fellowship Training in Pharmaceutical Sciences (Derek Drechsel, Toxicology student)
K08 (NIH) Training medical scientists (Andrew White, M.D. Ph.D., Ped. Neurol.)
EF Predoctoral Oxidative stress mediated adaptation by the ketogenic diet (Julie Milder,
Neuroscience graduate student)

Publications.

Refereed Journals

Patel MN, Ardelt BK, Yim GKW and Isom GE. Interaction of trimethyltin with hippocampal glutamate. **Neurotoxicology** 11:601-608, 1990.

Patel MN, Ardelt BK, Yim GKW and Isom GE. Cyanide induces Ca²⁺-dependent and -independent release of glutamate from mouse brain slices. **Neurosci Lett** 131:42-44, 1991.

Patel MN, Yim GKW and Isom GE. Blockade of N-methyl-D-aspartate receptors prevents cyanide-induced neuronal injury in primary hippocampal cultures. **Toxicol Appl Pharmacol** 115:124-129, 1992.

Patel MN, Yim GKW and Isom GE. Potentiation of cyanide neurotoxicity by blockade of ATP-sensitive potassium channels. **Brain Res** 593:114-116, 1992.

Patel MN, Yim GKW and Isom GE. N-methyl-D-aspartate receptors mediate cyanide-induced cytotoxicity in hippocampal cultures. **Neurotoxicology** 14:35-40, 1993.

Patel MN, Peoples RW, Yim GKW and Isom GE. Enhancement of NMDA-mediated responses by cyanide. **Neurochem Res** 19:1319-1323, 1994.

Patel MN and McNamara JO. Selective enhancement of axonal branching of cultured dentate gyrus neurons by neurotrophic factors. **Neuroscience** 69:763-770, 1995.

Patel M, Day BJ, Crapo JD, Fridovich I and McNamara JO. Requirement for superoxide in excitotoxic cell death. **Neuron** 16:345-355, 1996.

He X-P*, **Patel M***, Whitney K*, Janumpalli S, Tenner AS and McNamara JO. Glutamate receptor GluR3 antibodies and death of cortical neurons. **Neuron** 20:153-63, 1998.

**Indicates equal contribution by authors.*

Patel M. Inhibition of neuronal apoptosis by a metalloporphyrin superoxide dismutase mimic. **J Neurochem** 71:1068-1074, 1998.

Melov S, Coskun P, **Patel M**, Tuinstra R, Cottrell B, Jun B, Huang T, Dizdaroglu M, Epstein CJ, Miziorko H, Goodman S and Wallace DC. Mitochondrial disease in superoxide dismutase 2 mutant mice. **Proc Natl Acad Sci USA** 96:845-851, 1999.

Day BJ, **Patel M**, Calavetta L, Chang L-Y and Stamler JS. A novel mechanism for paraquat toxicity that involves nitric oxide synthase. **Proc Natl Acad Sci USA** 96:12760-12765, 1999.

Liang LP, Y.S. Ho and **Patel M**. Mitochondrial superoxide production in kainate-induced hippocampal damage. **Neuroscience** 101(3):563-570, 2000.

Mackensen BG, **Patel M**, Calvi C, Liang LP, Day B, Batinic-Haberle I, Fridovich I, Crapo JD, Pearlstein RD and Warner D.S. Neuroprotection from delayed post-ischemic administration of a metalloporphyrin catalytic antioxidant in the rat. **J. Neurosci.** 23(13) 2001.

- Li QY, Pedersen C, Day BJ and **Patel M**. Dependence of excitotoxic neurodegeneration on mitochondrial aconitase inactivation **J. Neurochem.** 78(4):746-755, 2001.
- Kachadourian R, Liochev SI, Cabelli DE, **Patel MN**, Fridovich I and Day BJ. 2-Methoxyestradiol does not inhibit superoxide dismutase **Arch. Biochem. Biophys.** 392: 349-353, 2001.
- Melov S, Doctrow S.R., Schneider JA, Haberson J, **Patel M**, Coskun PE, Huffman K, Wallace D.C. and Malfroy B. Lifespan extension and rescue of spongiform encephalopathy in superoxide dismutase 2 nullizygous mice treated with superoxide dismutase/catalase mimetics. **J. Neurosci.** 21:8348-8353, 2001.
- Patel M**, Liang LP and Roberts LJ. Enhanced hippocampal F₂-isoprostane formation following kainate-induced seizures. **J. Neurochem.** 79(5), 1065-1070, 2001.
- Levin ED, Christopher NC, Lateef S, El-Amir B, **Patel M**, Liang L and Crapo JD. Extracellular superoxide dismutase overexpression protects against aging-induced cognitive impairment in mice. **Behavior Genetics**, 32(2):119-25, 2002.
- Sheng H, Bowler R, Enghild J, **Patel M**, Calvi CL, Day BJ, Pearlstein RD, Crapo JD, Warner DS. Effects of metalloporphyrin catalytic antioxidants on murine responses to temporary middle cerebral artery occlusion. **Free Rad. Biol. Med.** 33(7):947-61, 2002.
- Patel M**, Li Q-Y. Age-dependence of seizure-induced oxidative stress. **Neuroscience**, 118(2):431-437, 2003.
- Bowler RP, Arcaroli J, Abraham E, **Patel M**, Chang L-Y, Crapo JD. Evidence for extracellular superoxide dismutase as a mediator of hemorrhage-induced lung injury. **Am J. Physiol.** 284: L680-L687, 2003.
- Kachadourian R, Flaherty MM, Crumbliss AL, **Patel M**, Day BJ. Synthesis and in vitro antioxidant properties of manganese(III) β -octabromo-*meso*-tetrakis(4-carboxyphenyl)porphyrin. **J. Inorg. Biochem.** 95:240-248, 2003.
- Patel M**. Metalloporphyrins improve the survival of *Sod2* deficient neuronal cultures. **Aging Cell** 2(4):219-222, 2003.
- Liang LP, **Patel M**. Mitochondrial oxidative stress and increased seizure susceptibility in *Sod2*^{-/+} mice **Free Rad. Biol. Med.** 36(5):542-554, 2004.
- Liang LP and **Patel M**. Iron-sulfur enzyme mediated mitochondrial superoxide toxicity in experimental Parkinson's disease. **J. Neurochem.** 90:1076-1084, 2004.
- Patel M**, Li QY, Chang L-Y, Crapo JD, Liang L-P. NADPH oxidase activation and extracellular superoxide radicals in seizure-induced neuronal death. **J. Neurochem.** 92(1)123-131, 2005.
- Seznec, H, Simon D, Bouton C, Reteunaeur, L, Hertzog A, Procaccio V, **Patel M**, Koenig M, Puccio H. Friedrich's ataxia, the oxidative stress paradox. **Human Mol. Genetics**: 14(4):463-74; 2005.
- Liang LP, **Patel, M**. Seizure-induced changes in mitochondrial redox status **Free Rad. Biol. Med.** 40(4): 2006.
- Drechsel DA, Liang LP, **Patel M**. 1-methyl-4-phenylpyridinium-induced alterations of glutathione in immortalized rat dopaminergic neurons. **Toxicol. Appl. Pharmacol.** 220:341-348, 2007.
- Liang L-P, Huang J, Fulton R, Day BJ, **Patel M**. An orally active metalloporphyrin protects against 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine neurotoxicity *in vivo*. **J. Neurosci.** 27(16):4326-4333, 2007.
- Castello PR, Drechsel D, **Patel M**. Mitochondria are a major source of paraquat-induced reactive oxygen species production. **J. Biol. Chem.** Vol 282 (19): 14186-14193, 2007.
- Liang L-P, Beaudoin M, Fritz MJ, Fulton R, **Patel M**. Kainate induced seizures, oxidative stress and neuronal loss in aging rats. **Neuroscience**; 147:1114-1118, 2007.
- Kulich S.M., Horbinski M, **Patel M** Chu C.T. 6-Hydroxydopamine induces mitochondrial ERK activation. **Free Rad. Biol. Med.** 43(3):372-83; 2007.

- Patel M**, Liang L-P, Hou H, Williams BB, Kmiec M, Swartz, HM, Fessel J, Roberts LJ. Seizure-induced formation of isofurans: novel products of lipid peroxidation whose formation is positively modulated by oxygen tension **J. Neurochem.**104:264-270, 2008.
- Castello P.R., Drechsel, DA, Day BJ, **Patel M**. Inhibition of mitochondrial hydrogen peroxide production by glyoxylate metalloporphyrins **J. Pharm. Exp. Ther.** 2008 In press.
- Jarrett SJ, Liang LP, Hellier J, Staley, KJ, **Patel M**. Mitochondrial DNA damage and impaired base excision repair during epileptogenesis, **Neurobiol. Dis.**2008 In press
- Mitochondrial redox regulation by the ketogenic diet. Jarrett SJ, Liang LP, Milder JB, **Patel M**. (submitted).
- Liang L-P, **Patel M**. Seizure induced changes in mitochondrial iron and its relationship with neuronal injury (submitted).

Review articles

- Patel M** and Day BJ. Metalloporphyrin class of therapeutic catalytic antioxidants. **Trends Pharmacol Sci** 20:359-364, 1999.
- Patel M**. Oxidative stress, mitochondrial dysfunction and epilepsy. **Free Radical Research**, 36(11):1139-1146, 2002.
- Patel M**. Mitochondrial dysfunction and oxidative stress: cause and consequence of epileptic seizures. **Free Rad. Biol. & Med.** 37:12, 1951-1962, 2004.
- Fariss MW, Chan CB, **Patel M**, Van Houten B, Orrenius S. Role of mitochondria in toxic oxidative stress. **Molecular Interventions** 5(2):94-111, 2005.
- Drechsel DA, Castello PR and **Patel, M**. Mechanisms of environmental neurotoxicant-induced oxidative stress, Invited review, *Free Rad. Biol. Med.* (in revision).

Book chapters

- McNamara JO, **Patel M**, He X-P, Janumpalli S and Whitney K. Glutamate receptor autoimmunity in Rasmussen's encephalitis. **Cold Spring Harbor Symposia on Quantitative Biology: Function and Dysfunction in the Nervous System**. Vol 61, pp 327-332, 1996.
- McNamara JO, Whitney KD, Andrews IA, He XP, Janumpalli S and **Patel MN**. Evidence for glutamate receptor autoimmunity in the pathogenesis of Rasmussen encephalitis. In: **Jasper's Basic Mechanisms of the Epilepsies, 3rd Edition: Advances in Neurology**, Volume 79, Delgado-Escueta AV, Wilson WA, Olsen RW and Porter RJ, eds. Philadelphia: Lippincott, Williams & Wilkins, pp. 543-550, 1999.
- Patel, M** and Liang LP. The Emerging Role of Mitochondrial Dysfunction in Epilepsy. In: **Encyclopedia of Epilepsy Research**, Editor: Philip Schwartzkroin (submitted).

News and Views, Book Reviews and Letters

- Patel M**. Superoxide involvement in excitotoxicity: SOD-mimetic holds promise as a novel therapeutic agent. **Mol Psychiatry** 1:362-363, 1996.
- Patel, M**. Funding success taskforce report. AES News December, 2007 meeting issue.