

Curriculum Vitae
MEI HUANG, Ph. D.

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EDUCATION

Undergraduate (B. S.)

Sept. 1994 -- July 1998

Major: Pharmacy on Chinese Traditional Medicine.

School of Chinese Traditional Medicine, Shenyang Pharmaceutical University, China

Graduate (Ph. D)

Sept. 1998 -- August 2002

Major: Neuropharmacology

Department of Pharmacology, School of Pharmacy, Shenyang Pharmaceutical University, China.

TRAINING

Department of Pharmacology, School of Pharmacy, Shenyang Pharmaceutical University, China.

Postdoctoral Research Fellow, Research and Teaching assistant; August 2002 -- July 2003

Departments of Psychiatry and Pharmacology, Vanderbilt University, Nashville, USA

Postdoctoral Research Fellow; August 2003 – July 2008

ACADEMIC APPOINTMENTS

Departments of Psychiatry and Pharmacology, Vanderbilt University, Nashville, USA

Research Assistant Professor; July 2008 – June 2012

Department of Psychiatry and Behavior Science, Northwestern University, Chicago, IL

Research Assistant Professor; July 2012-Present

Adjunct Assistant Professor; Dec 2011-June 2012

HONORS AND AWARDS

2005 NARSAD Young Investigator Award, the National Alliance for Research on Schizophrenia and Depression, USA

2006 CINP (Collegium Internationale Neuro-Psychopharmacologium) Young Investigator Award, USA

2007 NARSAD Young Investigator Award, the National Alliance for Research on Schizophrenia and Depression, USA

PARTICIPATION IN PROFESSIONAL SOCIETIES AND EXTRAMURAL ORGANIZATIONS

2004-Current Society for Neuroscience, USA

2006-2008 CINP (Collegium Internationale Neuro-Psychopharmacologicum), USA

EDITORIAL AND MANUSCRIPT REVIEW RESPONSIBILITIES

Drug Dependence and Addiction (Editorial Board Member)

Journal of Psychiatry and Behaviour Therapy (Editorial Board Member)

AWARDS AND GRANTS

Co-PI (with Dr. Meltzer) and PI in grants

- Effects of an allosteric D1 potentiator on cognitive function in aged mice- behavioral and neurochemical. Eli Lilly Pharma, Co-PI with Dr. Meltzer, under contract.
- The mechanism of ST100021 on neurotransmitter efflux related to psychosis. Sumitomo Dainippon Pharma Co., Ltd. Japan. Co-PI, under contract.
- 4/19/2019-4/19/2020 Supplemental studies for model of treatment resistant negative symptoms project. ACADIA Pharma. Co-PI,
- 9/13/18-8/31/2020 Effect of AGN-241751 on cognition in mice. Allergan Sales, LLC. Co-PI.
- 4/26/2018-4/26/2019 Studies to investigate the mechanism of action of Sunovion compound SEP-856. Sunovion Pharmaceuticals Inc. Co-PI.
- 9/26/2016-9/26/2019 Effect of valbenazine (NMAT2 inhibitor) on neurotransmitter efflux. Neurocrine Bioscience, Inc. Co-PI.
- 9/1/2016-3/31/2019 Rapastinel mechanism of action and effects on cognitive function. Allergan Sale, LLC. Co-PI.
- 4/15/2017-4/15/2018 Contribution of dopamine D3 receptor partial agonism of cariprazine to improve cognition and psychosis. Allergan Sales, LLC. Co-PI.
- 3/17/2016-3/17/2018 Vortioxetine as a potential enhancer of cognition in schizophrenia. Takeda Pharmaceuticals USA, Inc. Co-PI.
- 3/14/2014-3/14/2017 Dialysis and Behavior Studies with the N-methyl-D-aspartate receptor (NMDAR) partial agonist, GLYX-13. Naurex Inc. Co-PI.
- 2007 NARSAD Young Investigator Award, the National Alliance for Research on Schizophrenia and Depression, USA, PI
- 2006 CINP (Collegium Internationale Neuro-Psychopharmacologium) Young Investigator Award, USA
- 2005 NARSAD Young Investigator Award, the National Alliance for Research on Schizophrenia and Depression, USA, PI

Key –investigator (with Dr. Meltzer as PI) in Grants:

2003-2006 Serotonin1A Agonists and Cognition in Schizophrenia: Stanley Medical Research Institute

2003-2005 Development of Drug Treatment for Schizophrenia: Ritter Foundation

2003-2004 The biological Rationale for Combining Divalproate and Antipsychotic Drugs (APDs) for the Treatment of Schizophrenia and Psychotic Mood Disorders: Abbott Pharmaceuticals

2003-2004 The effect of Cannabinoid (CB1) Receptor Antagonists on DA and Ach Release in Rat Medial Prefrontal Cortex and Hippocampus: Solvay Pharmaceuticals

2003-2005 Regulation of Cortical and Hippocampal DA and ACh Release by Asenapine; Organon/Pfizer.

2004-present Mechanism of Action of Novel Antipsychotic Drug Candidates-Stanley Foundation Grant

2004-2005 Effect of Bifeprunox on Dopamine and Acetylcholine Release in the Medial Prefrontal Cortex, Hippocampus and Nucleus Accumbens-- Solvay Pharmaceuticals

2004-2007 Effect of AC260584/ Pimvanserin/Desmethylclozapine/Sabcomline on neurotransmitter efflux.

- Acadia Pharma.
- 2004-2005 Effect of novel atypical antipsychotic drug Aripiprazole on acetylcholine and dopamine efflux. Bristol Myers Squibb Pharma.
- 2005-2007 Effect of Valproic acid on cognition in schizophrenia – Abbott Laboratoires
- 2005-2006 Mass Spectrometry Instrument Grant-Wasie Foundation
- 2006-2007 Effect of Eszopiclone on Monoamine Efflux in Rat Brain- Sepracor
- 2007-2008 Compare the effect of paliperidone and risperidone on acetylcholine and dopamine efflux. Janssen Pharma.
- 2007- 2009 Mechanism of action of alpha 7 nicotinic receptor agonist- Memory/Forum Pharmaceuticals
- 2013-2014 Effect of amphetamine on Alpha-CaMKII heterozygous knockout mice, as compared with wild type controls, using microdialysis- Astellas Research Institute of America
- 2013-2015 Glutamatergic Agents to Improve Cognitive Impairment in Schizophrenia - Naurex, Inc
- 2012-2015 Dialysis and Behavior Studies with NTP260 Neuro-Therapeutics Pharma, Inc
- 2014-2016 Dialysis and behavior studies for cognition improvement of RP5063- ReViva Pharma, Inc.
- 2015-2016 The effect of D1-PAM on acute and subchronic PCP-induced hDKi mice using in vivo microdialysis. Eli Lilly Pharmaceuticals, Inc.
- 2008-present Development of novel targets for cognitive improvement in schizophrenia- Dainippon Sumitomo Pharma.
- 2016-present Pimavanserin and lurasidone studies on negative symptoms, positive symptoms, and cognitive impairment ---Acadia Pharma.

INVITED LECTURES

Huang M*, Meltzer HY. Effect of new drug BL 1020 on extracellular dopamine efflux in rat cortex, hippocampus, nucleus accumbens and putamen. Sepracor Research Forum. October 11 – 13, 2007, Salt Lake City, Utah, USA.

PUBLICATIONS AND SCHOLARLY WORK

Peer-reviewed Original Investigations:

Huang M, Liu W, Wu CF. Effect of dopamine receptor antagonists on ethanol-induced ascorbic acid and hydroxyl radical release in rat striatum. *Chinese Pharmacologist*. 2000, 17(2): 32-33.

Liu W, Wu CF, **Huang M**, Xiao K. Opposite effects of sulpiride and SCH 23390 on ethanol-induced striatal ascorbic acid release in intact and 6-hydroxydopamine lesioned rats. *Brain Research*. 2000, 869(1-2): 31-38.

Liu W, Wu CF, Liu J, **Huang M**, Xiao K. Differential effects of acute administration of haloperidol and clozapine on ethanol-induced ascorbic acid release in rat striatum. *European Journal of Pharmacology*. 2000, 398(3): 333-339.

Wu CF, Liu J, Liu W, Consolo S, **Huang M**, Yang JY. Failure of 5-HT₃ receptors in regulation of ethanol-induced ascorbic acid release in rat striatum. *Addiction Biology*. 2001, 6: 25-34.

Huang M, Wu CF. The function and regulation of ascorbic acid in central nervous system (Review). *Journal of Shenyang Pharmaceutical University* 2002, 19(1): 74-78.

Huang M, Liu W, Li Q, Wu CF. Endogenous released ascorbic acid suppresses ethanol-induced hydroxyl radical production in rat striatum. *Brain Research*. 2002, 944(1-2): 90-96.

Yan PG, Wu CF, **Huang M**, Liu W. Role of nitric oxide in ethanol-induced ascorbic acid release in striatum of

- freely moving mice. *Toxicology Letter*. 2003, 145(1): 69-78.
- Huang M**, Sun BS, Zhao YQ, Liu W, Mesquita Spranger MI, Yang JY, Wu CF. Effects of catechin and its polymers on ethanol-induced ascorbic acid and hydroxyl radical release in mouse striatum. *Chinese Journal of Natural Medicines (English Edition, first issue)*. 2003, 1(1): 34-40.
- Huang M**, Zhao YJ, Wu CF. A review on anti-oxidative effects and mechanisms of compounds in grape seeds. *Chinese Traditional and Herbal Drugs*. 2003, 34(3): 285-287.
- Yan PG, Wu CF, **Huang M**, Liu W, Yang JY. Ascorbic acid antagonizes the inhibitory effect of acute ethanol on nitrite levels in the striatum of freely moving mice. *Neuroscience Letter*. 2003, 352(3): 183-186.
- Hou Y, Yang JY, Wu CF, **Huang M**. Effects of clozapine, olanzapine and haloperidol on ethanol-induced ascorbic acid release in mouse striatum. *Prog Neuro-Psychopharmacol Biol Psychiatry* 2005, 29: 83-89
- Li Z, **Huang M**, Ichikawa J, Dai J, Meltzer HY. N-Desmethylozapine, a major metabolite of clozapine, increases cortical dopamine and acetylcholine release via stimulation of M1 muscarinic receptors. *Neuropsychopharmacology* 2005, 30: 1986-95.
- Li Z, Ichikawa J, **Huang M**, Dai J, Meltzer HY. ACP-103, a 5-HT_{2A/2C} receptor antagonist, potentiates haloperidol-induced dopamine release in rat medial prefrontal cortex and nucleus accumbens. *Psychopharmacology* 2005, 183: 144-153.
- Meltzer HY, Li Z, **Huang M**, Prus AJ. Serotonergic mechanisms in schizophrenia: evolution and current concepts. *Current Psychosis and Therapeutics Reports*. 2006, 4: 12-19.
- Huang M**, Ichikawa J, Li Z, Dai J, Meltzer HY. Augmentation by citalopram of risperidone-induced monoamine release in rat prefrontal cortex. *Psychopharmacology (Berl)* 2006, 185(3): 274-281
- Huang M**, Li Z, Dai J, Ichikawa J, Meltzer HY. Effects of divalproex and atypical antipsychotic drugs on dopamine and acetylcholine efflux in rat medial prefrontal cortex and hippocampus. *Brain Research* 2006, 1099(1): 44-55.
- Prus AJ, **Huang M**, Li Z, Dai J, and Meltzer HY. The neurotensin analog NT69L enhances medial prefrontal cortical dopamine and acetylcholine efflux: Potentiation of risperidone-, but not haloperidol-, induced dopamine efflux. *Brain Research* 2007, 1184:354-364.
- Li Z, Bonhaus DW, **Huang M**, Prus AJ, Dai J, Meltzer HY. AC260584 (4-[3-(4-butylpiperidin-1-yl)-propyl]-7-fluoro-4H-benzo[1,4]oxazin-3-one), a selective muscarinic M(1) receptor agonist, increases acetylcholine and dopamine release in rat medial prefrontal cortex and hippocampus. *Eur J Pharmacol*. 2007, 572(2-3): 129-137.
- Li Z, **Huang M**, Prus AJ, Dai J, Meltzer HY. 5-HT₆ receptor antagonist SB-399885 potentiates haloperidol and risperidone-induced dopamine efflux in the medial prefrontal cortex or hippocampus. *Brain Research* 2007, 1134(1): 70-78.
- Huang M**, Li Z, Prus AJ, Dai J, Shahid M, Wong EHF, Meltzer HY. Asenapine increases dopamine, norepinephrine, and acetylcholine efflux in rat medial prefrontal cortex and hippocampus. *Neuropsychopharmacology*, 2008, 33(12): 2934-2945.
- Geffen Y, Nudelman A, Gil-Ad I, Rephaeli A, **Huang M**, Savitsky K, Klapper L, Winkler I, Meltzer HY, Weizman A. BL-1020: A novel antipsychotic drug with GABAergic activity and low catalepsy, is efficacious in a rat model of schizophrenia. *Eur Neuropsychopharmacol*. 2008, 19(1): 1-13.

- Snigdha S, Horiguchi M, **Huang M**, Li Z, Shahid M, Neill JC, Meltzer HY. Attenuation of phencyclidine-induced object recognition deficits by the combination of atypical antipsychotic drugs with pimavanserin (ACP 103), a 5-hydroxytryptamine_{2A} receptor inverse agonist. *J Pharmacol Exp Ther.* 2010, 332(2): 622-631.
- Horiguchi M, **Huang M**, Meltzer HY. The role of 5-hydroxytryptamine₇ receptors in the phencyclidine-induced novel object recognition deficit in rats. *J Pharmacol Exp Ther.* 2011, 338(2): 605-614.
- Horiguchi M, **Huang M**, Meltzer HY. Interaction of mGlu_{2/3} agonism with clozapine and lurasidone to restore novel object recognition in subchronic phencyclidine-treated rats. *Psychopharmacology (Berl)* 2011, 219(1): 13-24.
- Huang M**, Dai J, Meltzer HY. 5-HT_{2A} and 5-HT_{2C} receptor stimulation are differentially involved in the cortical dopamine efflux--studied in 5-HT_{2A} and 5-HT_{2C} genetic mutant mice. *Eur J Pharmacol*, 2011, 652: 40-45.
- Huang M**, Horiguchi M, Felix AR, Meltzer HY. 5-HT_{1A} and 5-HT₇ receptor contribute to lurasidone-induced dopamine efflux. *NeuroReport* 2012, 23(7): 436-440.
- Meltzer HY, Rajagopal L, **Huang M**, Oyamada Y, Kwon S, Horiguchi M. Translating the N-Methyl-D-aspartate receptor antagonist model of schizophrenia into treatments for the cognitive impairment in schizophrenia. *Int J Neuropsychopharmacol.* 2013, 16(10):2181-2194.
- Horiguchi M, Hannaway KE, Adekun AE, **Huang M**, Jayathilake K, Meltzer HY. D(1) receptor agonists reverse the subchronic phencyclidine (PCP)-induced novel object recognition (NOR) deficit in female rats. *Behav Brain Res.* 2013, 238:36-43.
- Huang M**, Felix AR, Flood DG, Bhuvaneshwaran C, Hilt D, Köenig G, Meltzer HY. The novel α ₇ nicotinic acetylcholine receptor agonist EVP-6124 enhances dopamine, acetylcholine, and glutamate efflux in rat cortex and nucleus accumbens. *Psychopharmacology (Berl).* 2014, 231(23):4541-51.
- Rajagopal L, Massey BW, **Huang M**, Oyamada Y, Meltzer HY. The novel object recognition test in rodents in relation to cognitive impairment in schizophrenia. *Curr Pharm Des.* 2014, 20(31):5104-14. (Supported by Daiippon Sumitomo Pharma Co. Ltd, Japan)
- Huang M**, Felix AR, Kwon S, Lowe D, Wallace T, Santarelli L, Meltzer HY. The alpha-7 nicotinic receptor partial agonist/5-HT₃ antagonist RG3487 enhances cortical and hippocampal dopamine and acetylcholine release. *Psychopharmacology (Berl).* 2014, 231(10): 2199-210.
- Huang M**, Panos JJ, Kwon S, Oyamada Y, Rajagopal L, Meltzer HY. Comparative effect of lurasidone and blonanserin on cortical glutamate, dopamine and acetylcholine efflux: role of relative serotonin (5-HT)_{2A} and DA D₂ antagonism and 5-HT_{1A} partial agonism. *J Neurochem.* 2014, 128(6): 938-49.
- Huang M**, Kwon S, Oyamada Y, Rajagopal L, Miyauchi M, Meltzer HY. Dopamine D₃ receptor antagonism contributes to blonanserin induced cortical dopamine and acetylcholine efflux and enhancement of novel object recognition. *Pharmacol Biochem Behave.* 2015, 138:49-57.
- Kelly CJ, **Huang M**, Meltzer H, Martina M. Reduced Glutamatergic Currents and Dendritic Branching of Layer 5 Pyramidal Cells Contribute to Medial Prefrontal Cortex Deactivation in a Rat Model of Neuropathic Pain. *Front Cell Neurosci.* 2016, 10 (133): 1-12.
- Kasper JM, McCue DL, Milton AJ, Szwed A, Sampson CM, **Huang M**, Carlton S, Meltzer HY, Cunningham

KA, Hommel JD. Gamma-aminobutyric acidergic projections from the dorsal raphe to the nucleus accumbens are regulated by neuromedin U. *Biol Psychiatry*. 2016, pii: S0006-3223(16)31096-4.

Huang M, Kwon S, He W, Meltzer HY. Neurochemical arguments for the use of dopamine D4 receptor stimulation to improve cognitive impairment associated with schizophrenia. *Pharmacol Biochem Behav*. 2017, 157: 16-23.

Rajagopal L, Kwon S, **Huang M**, Michael E, Bhat L, Cantillon M, Meltzer HY. RP5063, an atypical antipsychotic drug with a unique pharmacologic profile, improves cognition declarative memory and psychosis in mouse models of schizophrenia. *Behav Brain Res*. 2017, 332: 180-199.

Pogorelov VM, Rodriguiz RM, Cheng J, **Huang M**, Schmerberg CM, Meltzer HY, Roth BL, Kozikowski AP, Wetsel WC. 5-HT_{2C} Agonists modulate schizophrenia-like behaviors in mice. *Neuropsychopharmacology*. 2017, 42(11): 2163-2177.

Rajagopal L, **Huang M**, Michael E, Kwon S, Meltzer HY. TPA-023 attenuates subchronic phencyclidine-induced declarative and reversal learning deficits via GABA_A receptor agonist mechanism: possible therapeutic target for cognitive deficit in schizophrenia. *Neuropsychopharmacology*. 2018, 43(12):2468-2477.

Huang M, Kwon S, Rajagopal L, He W, Meltzer HY. 5-HT_{1A} partial agonism and 5-HT₇ antagonism restore episodic memory in subchronic phencyclidine-treated mice: role of brain glutamate, dopamine, acetylcholine and GABA. *Psychopharmacology (Berl)*. 2018, 235(10): 2795-2808.

Ziller MJ, Ortega JA, Quinlan KA, Santos DP, Gu H, Martin EJ, Galonska C, Pop R, Maidl S, Di Pardo A, **Huang M**, Meltzer HY, Gnirke A, Heckman CJ, Meissner A, Kiskinis E. Dissecting the functional consequences of De Novo DNA methylation dynamics in human motor neuron differentiation and physiology. *Cell Stem Cell*. 2018, pii: S1934-5909(18)30106-1.

Meltzer HY, Rajagopal L, Matrisciano F, Hao JL, Svensson KA, **Huang M**. The allosteric dopamine D1 receptor potentiator, DETQ, ameliorates subchronic phencyclidine-induced memory deficits and enhances cortical acetylcholine efflux. *Behav Brain Res*. 2019, 361: 139-150.

Caragher SP, Shireman JM, **Huang M**, Miska J, Atashi F, Park CH, Warnke L, Xiao T, Lesniak MJ, James CD, Meltzer HY, Tryba AK, Ahmed A. Activation of dopamine receptor 2 (DRD2) prompts transcriptomic and metabolic plasticity in glioblastoma. *J Neurosci*. 2019, 39(11): 1982-1993.

Huang M, He W, Kiss B, Farkas B, Adham N, Meltzer HY. The role of dopamine D3 receptor partial agonism in cariprazine-induced neurotransmitter efflux in rat hippocampus and nucleus accumbens. *J Pharmacol Exp Ther*. 2019; 371(2):517-525.

Huang M, He W, Rajagopal L, Kudwa A, Grigoriadis DE, Meltzer HY. Effects of NBI-98782, a selective vesicular monoamine transporter 2 (VMAT2) inhibitor, on neurotransmitter efflux and phencyclidine-induced locomotor activity: Relevance to tardive dyskinesia and antipsychotic action. *Pharmacol Biochem Behav*. 2020; 190:172872.

Kim YJ, Kong Q, Yamamoto S, Kuramoto K, **Huang M**, Wang N, Hong JH, Xiao T, Levine B, Qiu X, Zhao Y, Miller RJ, Dong H, Meltzer HY, Xu M, He C. An autophagy-related protein Becln2 regulates cocaine reward behaviors in the dopaminergic system. *Sci Adv*. 2021; 7(8):eabc8310.

Invited Reviews and Commentaries:

Commentary on Schizophrenia Research Forum: Walling D et al. Phase 2 trial of an alpha-7 nicotinic receptor agonist (TC-5619) in negative and cognitive symptoms of schizophrenia. *Schizophr. Bull.* 2015.

Books and Book Chapters:

Meltzer HY, **Huang M**. In vivo actions of atypical antipsychotic drug on serotonergic and dopaminergic systems. *Progress in Brain Research*, 2008, 172: Chapter 9, 177-197.

Neugebauer NM, Rajagopal L, **Huang M**, Meltzer HY. Chapter 67- Phencyclidine (PCP)-induced deficits in novel object recognition. *Neuropathology of Drug Additions and Substance Misuse. Volume 2: Stimulants, Club and Dissociative Drugs, Hallucinogens, Steroids, Inhalants and International Aspects.* 2016, 723-732. Chapter 67.

Conference Abstract Presentation

Liu W*, Wu CF, Liu J, Huang M, Xiao K. Differential effects of acute administration of haloperidol and clozapine on ethanol-induced ascorbic acid release in rat striatum. Proceedings of the 3rd Congress of Chinese Society for Neuroscience. Nov. 1-5, 1999, Beijing, China.

Huang M*, Liu W, Wu CF. Effect of dopamine receptor antagonists on ethanol-induced ascorbic acid and hydroxyl radical release in rat striatum. The 4th Congress of Chinese Society for Neuroscience. Acta Chin Society Pharmacol 2000, 17(2): 32-33, China.

Huang M*, Wu CF, Liu W. Endogenous ascorbic acid release inhibits ethanol-induced hydroxyl radical generation in rat striatum studied by brain microdialysis. International Symposium on Pharmaceutical Science 2000, Sep.25-26, Shenyang, China

Huang M*, Liu W, Wu CF. Endogenous ascorbic acid release inhibits ethanol-induced hydroxyl radical generation in striatum. The 9th Congress on Pharmacy of Chinese Society of Pharmacology. Dec. 15-21, 2000, Haikou, China.

Huang M, Sun BS, Zhao YQ, Liu W, Mesquita Spranger MI, Yang JY, Wu CF*. Resveratrol and other constituents in red wine increase ethanol-induced ascorbic acid release and suppress hydroxyl radical generation in mouse striatum. Polyphenols Communications 2002, XXI International Conference on polyphenols. Marrakech, Morocco. Sep. 9-12, 2002. (Oral)

Huang M*, Liu W, Wu CF. Compounds in red wine inhibit ethanol-induced hydroxyl radical generation in mice striatum. The 8th Congress of Chinese Society for Pharmacology. Nov. 24-27, 2002, Shanghai, China

Ichikawa J*, Li Z, Huang M, Meltzer HY. Effects of divalproex and antipsychotic drug combination on dopamine release in rat prefrontal cortex: a possible basis for their synergistic effects in psychosis. ACNP (American College of Neuropsychopharmacology) 42nd Annual Meeting. Dec 7-11, 2003, San Juan, Puerto Rico, USA.

Meltzer HY*, Dai J, Li Z, Huang M, Ichikawa J. Valproic acid (VPA), an anticonvulsant mood stabilizer, potentiates antipsychotic drugs (APDs)-induced dopamine (DA) release in rat medial prefrontal cortex (mPFC) but not nucleus accumbens (NAC). ACNP (American College of Neuropsychopharmacology) 42nd Annual Meeting. Dec 7-11, 2003, San Juan, Puerto Rico, USA.

Ichikawa J*, Huang M, Dai J, Meltzer HY. Interactive effects of risperidone and citalopram on cortical monoamine release. CINP (Collegium Internationale Neuro-Psychopharmacologicum) XXIVth Congress. June 20-24, 2004, Paris, France.

Li Z*, Ichikawa J, Huang M, Dai J, Meltzer HY. N-desmethylclozapine (NDMC), an active metabolite of clozapine (CLO), increases cortical dopamine (DA) and acetylcholine (ACH) release via stimulation of M1 muscarinic receptors. 34th Annual Meeting of Society for Neuroscience. Oct. 23-27, 2004, San Diego, CA, USA.

- Ichikawa J*, Chung Y, Li Z, Dai J, Huang M, Meltzer H. Telenzepine, a muscarinic M1/4 antagonist, blocks the ability of clozapine and risperidone to increase cortical acetylcholine and dopamine release: role of M1/4 agonism in schizophrenia. 34th Annual Meeting of Society for Neuroscience. Oct. 23-27, 2004, San Diego, CA, USA.
- Huang M*, Li Z, Prus AJ, Ichikawa J, Dai J, Meltzer HY. 5-HT2A and 5-HT2C receptor antagonism enhances risperidone-induced dopamine efflux in rat medial prefrontal cortex and diminishes it in the nucleus accumbens. 35th Annual Meeting of Society for Neuroscience. Nov. 12-16, 2005, Washington DC, USA.
- Li Z*, Huang M, Prus AJ, Ichikawa J, Dai J, Meltzer HY. Effect of the 5-HT2C receptor antagonist SB242084 in combination with haloperidol and the 5-HT2A/2C inverse agonist ACP103 on dopamine (DA) efflux in rat brain. 35th Annual Meeting of Society for Neuroscience. Nov. 12-16, 2005, Washington DC., USA.
- Li Z*, Huang M, Prus AJ, Ichikawa J, Dai J, Meltzer HY. The M1 agonist AC260584 increases cortical and hippocampal acetylcholine and dopamine release via stimulation of M1 muscarinic receptors. 35th Annual Meeting of Society for Neuroscience. Nov. 12-16, 2005, Washington DC., USA.
- Li Z*, Huang M, Prus AJ, Dai J, Meltzer HY. Effect of bifenox on antipsychotic drugs-induced dopamine release in rat prefrontal cortex and nucleus accumbens. ACNP 44th Annual Meeting, Dec 11-15, 2005, Waikoloa, Hawaii, USA.
- Li Z, Huang M, Shahid M, Meltzer HY*. Asenapine: effects of acute and chronic administration on dopamine and acetylcholine efflux. Society of Biological Psychiatry 61st Annual Convention & Scientific Program. May 18-20, 2006, Toronto, Ontario, Canada.
- Huang M*, Li Z, Prus AJ, Gardell L, Bonhaus D, Dai J, Meltzer HY. Different effect of 5-HT2A and 5-HT2C receptor stimulation on cortical dopamine release in 5-HT2A knockout mice. CINP (Collegium Internationale Neuro-Psychopharmacologicum) XXVth Congress. July 9-14, 2006, Chicago, IL, USA.
- Prus AJ*, Huang M, Li Z, Dai J, Meltzer HY. The neurotensin analog NT69L enhances medial prefrontal cortical dopaminergic and cholinergic neurotransmission: interaction with receptors important for atypicality. CINP October 3, 2011 XXVth Congress. July 9-14, 2006, Chicago, IL, USA.
- Li Z*, Shahid M, Huang M, Prus AJ, Meltzer HY. Asenapine-induced elevations in rat prefrontal cortex and hippocampal dopamine after subchronic administration. CINP (Collegium Internationale Neuro-Psychopharmacologicum) XXVth Congress. July 9-14, 2006, Chicago, IL, USA.
- Meltzer HY*, Huang M, Li Z, Prus A. The molecular basis for add-on therapy for psychopathology, cognition and mood in schizophrenia. *Eur. Neuropsychopharmacol.* 2006, 16(S4): S166. The 19th ECNP Congress, 16-20, Sept 2006. Paris, France. (Oral)
- Huang M*, Prus AJ, Li Z, Dai J, Callahan PM and Meltzer HY. The nicotinic alpha-7 receptor partial agonist MEM3454 increases dopamine and acetylcholine in rat medial prefrontal cortex and hippocampus. 36th Annual Meeting of Society for Neuroscience. Oct. 14-18, 2006, Atlanta, GA, USA.
- Prus AJ*, Huang M, Li Z, Dai J, Meltzer HY. Effects of the neurotensin analog NT69L on dopamine and acetylcholine efflux in the medial prefrontal cortex and nucleus accumbens using microdialysis in rats. 36th Annual Meeting of Society for Neuroscience. Oct. 14-18, 2006, Atlanta, GA, USA.
- Li Z*, Huang M, Prus AJ, Dai J, Meltzer HY. Medial prefrontal cortical M1 muscarinic receptors are involved in dopamine efflux produced by clozapine but not risperidone. 36th Annual Meeting of Society for Neuroscience. Oct. 14-18, 2006, Atlanta, GA, USA.
- Huang M*, Prus AJ, Li Z, Dai J, Callahan PM and Meltzer HY. The nicotinic alpha-7 receptor partial agonist MEM3454 alone and combined with risperidone, increases dopamine and acetylcholine in rat medial prefrontal cortex and hippocampus. 45th ACNP Annual Meeting, Dec. 3-7, 2006, Hollywood, FL, USA.
- Huang M*, Li Z, Prus AJ, Dai J, Meltzer HY. 5-HT2A and 5-HT2C receptor stimulation are differentially involved in the cortical dopamine release in 5-HT2A and 5-HT2C genetic mutant mice. 2007 International

Congress on Schizophrenia Research, March 28th-April 01st 2007, Broadmoor, Colorado Springs, Colorado, USA.

- Huang M*, Li Z, Dai J, Callahan PM, Meltzer HY. MEM 3454 increases dopamine and acetylcholine release in rat medial prefrontal cortex and hippocampus, alpha-7 and 5-HT3 receptors involved. 37th Annual Meeting of Society for Neuroscience, Satellite meeting on "Nicotinic acetylcholine receptors as therapeutic targets". Oct 31-Nov 2, 2007, San Diego, CA, USA.
- Huang M*, Li Z, Prus AJ, Dai J, Meltzer HY. Different roles of 5-HT2A and 5-HT2C receptor stimulation in the cortical dopamine release in 5-HT2A and 5-HT2C genetic mutant mice. 37th Annual Meeting of Society for Neuroscience. Nov. 3-7, 2007, San Diego, CA, USA.
- Li Z*, Huang M, Dai J, Meltzer HY. Muscarinic M1, but not 5-HT1A, receptors in the medial prefrontal cortex (mPFC) are involved in dopamine (DA) release produced by subcutaneous administration of AC 260584 and N-desmethylozapine (ACP 104), the selective M1 receptor agonists. 37th Annual Meeting of Society for Neuroscience. Nov. 3-7, 2007, San Diego, CA, USA.
- Prus AJ*, Jacobson SM, Keusch A, Li Z, Huang M, Dai J, Haliw LA, Maxwell AM, Meltzer HY. Effects of combined administration of 5-HT1A, 5-HT2A and noradrenergic alpha2 receptor ligands on prefrontal cortical dopamine release. 37th Annual Meeting of Society for Neuroscience. Nov. 3-7, 2007, San Diego, CA, USA.
- Huang M*, Li Z, Dai J, Meltzer HY. Effect of paliperidone alone and in combination with serotonergic drugs to enhance efflux of dopamine (DA) and acetylcholine (ACh) in rat prefrontal cortex and nucleus accumbens. 46th ACNP (American College of Neuropsychopharmacology) Annual Meeting, Dec. 9-13, 2007, Boca Raton, FL, USA.
- Meltzer HY*, Huang M, Elkis H, Hacksell U, Mills R. Pimavanserin, a 5-HT2A inverse agonist, potentiates risperidone-induced cortical dopamine efflux in rats and the efficacy and tolerability of risperidone in the treatment of schizophrenia. 46th ACNP (American College of Neuropsychopharmacology) Annual Meeting, Dec. 9-13, 2007, Boca Raton, FL, USA.
- Meltzer H*, Huang M, Snigdha S, Li Z. Multi-target agents for psychosis: which targets, what is their importance, and are more needed? CINP (Collegium Internationale Neuro-Psychopharmacologicum) XXVI Congress. July 13-17, 2008, Munich, Germany. The International Journal of Neuropsychopharmacology, 2008, 11(1): P51, S-45.01. (Oral)
- Li Z*, Huang M, Li KX, Meltzer HY. ACP-103, a selective 5-HT2A/2C inverse agonist, potentiated risperidone- but not haloperidol-induced acetylcholine release in rat medial prefrontal cortex. 38th Annual Meeting of Society for Neuroscience. Nov. 15-19th, 2008, Washington DC, USA.
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MEDIA COVERAGE AND APPEARANCES

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